Quarterly Report October 1995

Prepared For:

Ingersoll-Rand Equipment Sales San Leandro, California

November 15, 1995

QUARTERLY REPORT OCTOBER 1995

Prepared For:

Ingersoll-Rand Equipment Sales 1944 Marina Boulevard San Leandro, California 94577

November 15, 1995

Prepared By:



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1.0 INTRODUCTION

Ingersoll-Rand Company (I-R) has contracted with Capsule Environmental Engineering (Capsule) to complete the implementation of the final corrective action design and related underground storage tank response activities for its equipment sales and maintenance facility located at 1944 Marina Boulevard in San Leandro, California.

As part of these activities, Capsule prepares quarterly activity reports for the facility. The objectives of these reports are to:

- Provide a summary of corrective action activities, including such work as construction, sampling, and maintenance being conducted at the facility during the quarter
- Provide a benchmark of data and interpretation to evaluate the performance of corrective action activities
- Comply with Alameda County and City of San Leandro reporting requirements

The Quarterly Report October 1995 (October Report) provides the data and summary from the quarterly ground water monitoring event that was conducted in late June and mid-July. Additionally, the October Report provides the investigation results from the additional ground water assessment work conducted during June and July 1995, and summarizes the treatment system activity status.

1.1 SITE DESCRIPTION

I-R operates a construction equipment sales and maintenance facility located at 1944 Marina Boulevard, San Leandro, Alameda County, California (see Figure 1). The eastern shore of the San Francisco bay is approximately 1.25 miles west of the facility. The local topography around the facility is fairly flat, sloping gently toward the bay. Facility land surface elevations range from 25 to 30 feet above sea level.

The facility is situated in an area of industrial and commercial development. It is bounded on the north by Southern Pacific railroad tracks and on the south by Marina Boulevard. Immediately to the west of the facility is a manufacturer of packaging materials. To the east is an office filing equipment manufacturer. The facility has perimeter fencing.

The property's building has two tenants. The office filing equipment manufacturer occupies the eastern portion of the building. I-R occupies the western portion of the building, which consists of an office and parts distribution area attached to a large bayed service area. To the north and west of the building is an outdoor equipment storage yard. The stored equipment includes both new and used construction machinery. Drilling rigs, compressors, compactors

and other construction equipment are commonly stored in this area while being readied for sale, repair, rental, and salvage.

1.2 UNDERGROUND STORAGE TANK ACTIVITIES CHRONOLOGY

A detailed underground storage tank chronology is provided in the Quarterly Report April 1995.

Generally, corrective action activities began with the submittal of an Underground Storage Tank Release report to the San Leandro Fire Department in 1989. Site investigation activities since 1989 include monitoring well and boring installation, ground water and soil sampling, and reporting.

In 1992, a soil vapor extraction (SVE) system was installed and operated for several months. System operation was discontinued when water levels rose and the system collected condensate. It is reported that 800 pounds of product were removed during initial operation.

In late 1994, five additional SVE vents were installed. These vents were installed to provide the SVE system with flexibility in vacuum configuration over a larger area, including the downgradient property boundary.

Comprehensive ground water sampling of monitoring wells was performed in November of 1989; June and October of 1994; and January, April, and June of 1995. Additionally, a sample was taken from MW-4 in November of 1990. The results indicated and confirmed the presence of gasoline-related volatile organic compounds (VOCs) and several chlorinated VOCs in low concentrations in site monitoring wells. The April 1995 sampling event and results are discussed in detail in section 2.0 of this report.

In March of 1995, Alameda County directed I-R to conduct additional ground water assessment work as part of remedial activities.

In May of 1995, SVE testing was conducted on several vent wells. The testing results were used as the basis for a redesign of the SVE system. Construction of the redesigned system began in mid-September and was completed in early October.

2.0 GROUND WATER DATA SUMMARY

The June 1995 ground water sampling event (June 1995 event) included monitoring wells MW-3, MW-4, and OB-1, and for the June 1995 event only, vent wells, VW-5, VW-6, VW-8, and VW-9. Figure 2 provides an overall site plan and sampling point locations.

During the May 1995 SVE testing, water was observed in several vents, apparently because of the high water table over the winter and spring. In order to provide additional data for the additional ground water assessment, these vents were included in the sampling schedule for the June 1995 event. Because of a mix-up in sampling parameters, the vent sampling was completed on two days, June 30 and July 27, 1995.

Nitrate and dissolved oxygen content were added to the routine sampling parameters for the June 1995 event. Table 1 provides a summary of the sampling points and analytical parameters for the event. The samples were collected and analyzed by Clayton Environmental Consultants. The analytical results, the chain of custody forms, and stabilization tests can be found in Appendix A.

The June and October 1994 and the January 1995 sampling events included upgradient wells MW-1 and MW-2. During a March 2, 1995, telephone conference with Alameda County Health Care Services, it was agreed that no additional quarterly sampling of MW-1 and MW-2 would be necessary.

2.1 GROUND WATER LEVEL DATA

Depth to water measurements were collected as part of the June 1995 event. The field measurements are recorded in the stabilization tests found in Appendix A. During July 1995, temporary measuring points were established for vents VW-5 through VW-9 and depth to water measurements collected as part of the field activities for the additional ground water assessment. These activities and the findings are discussed in section 3.0 of this report. A summary of all water level data and measuring point elevations is provided in Table 2.

During the June 1995, event water level elevations beneath the facility ranged between 11.3 to 13.03 feet above sea level. Overall, the water level elevations across the facility were down 0.68 to 1.10 feet from the April 1995 measurements. Water levels continued their decline from the January 1995 when water table elevations were at period of record highs.

During the period of record, the water levels have generally risen 2 to 3 feet, reflecting increasing precipitation from several dry years in the mid to late 1980s to rainfall amounts in the 1990s that are near the historic mean. Rainfall at the nearby San Leandro Marina's rainfall gage has varied from a low of 10.13 inches in the 1989-1990 water year to a high of 19.33 inches during the 1994-1995 water year (Alameda County 1995). The rainfall for April, May and June of 1995 was 0.98, 0.87 and 0.75 inches, respectively. The April amount was near the historic April average. May and June amounts were well above the monthly averages.

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2.1.1 Ground Water Gradient

The shallow ground water in the area of the facility appears to respond directly to rainfall events. Water level elevation hydrographs for the four monitoring wells are presented on Figure 3. Water level elevations in individual wells also continue to respond fairly uniformly. This uniform fluctuation results in generally consistent hydraulic gradients and ground water flow direction with time.

The general ground water flow direction remains to the southwest. Ground water contours for the June 1995 event are shown in Figure 4. The southwesterly direction remains consistent with past findings. The direction is also areally consistent with that reported in the https://example.com/hydrogeology-of-central-San Leandro (Woodward-Clyde Consultants (WCC), 1993).

For consistency with previous data plotting, Figure 4 was contoured using the monitoring well data only. After contouring, the water level data from the vents was added. The vent data generally fit and are consistent with the contoured elevations.

A flexure in the ground water contours was observed and discussed during the January and April 1995 events and reporting. The area of the flexure coincided generally with an area of coarser sand, identified during the 1990 boring program. The phenomenon appears to have occurred as the water table rose into this more permeable material. As a comparison of Figure 3 in the April 1995 report and Figure 4 in this report show that the flexure is dissipating as the ground water level declines.

Overall, it is generally acknowledged that because of the interlayered nature of the shallow subsurface, its likely contours are not as uniform as portrayed. Variations in soil particle size and permeability can cause local variations in flow direction.

2.1.2 Ground Water Flow Velocity

Ground water generally flows beneath the facility in a southwesterly direction. A ground water flow velocity can be calculated from:

$$v = (k \times i)n$$

where, v = ground water flow velocity (ft/day)

k = hydraulic conductivity (ft/day)

i = hydraulic gradient (ft/ft)

n = porosity (dimensionless)

The following list summarizes the variables and the information sources for the estimate of the variable value.

Variable	Estimate	Data Source
Hydraulic conductivity (k) Hydraulic gradient (I) Porosity (n)	9.0 ft/day ⁽¹⁾ 0.005 0.30 (2)	IT Corporation, Data Summary Report, 1990 Capsule, Quarterly Monitoring Report, October 1995 Freeze and Cherry (1979), Table 2.4

- (1) From pumping test performed on MW-4
- (2) The cited porosity range for sand was 25% to 40%. Based upon the silty and clayey nature of the site's sand, 30% was selected.

A ground water velocity of 0.15 feet per day or 55 feet per year was calculated from these estimates. This velocity is considered low. Appendix B presents the velocity calculations.

2.2 GROUND WATER ANALYTICAL DATA

The June 1995 event water samples were analyzed using the methods listed in Table 1. As a one-time sampling, dissolved nitrate as N and in situ dissolved oxygen were measured. The organic analyses results are presented in Table 3.

In the monitoring wells, no new aromatic or chlorinated VOCs were detected during the June 1995 event. Concentrations for MW-3 were generally lower than previous sampling events. Concentrations for MW-4 were generally lower or in the same range as previous sampling events. Samples collected from VW-5 and VW-6 did not detect any gasoline or chlorinated constituents. Samples collected from VW-8 and VW-9 detected several gasoline constituents. Additional discussion is provided on individual chlorinated and aromatic organic compounds below.

In most instances, the laboratory reported concentrations of the benzene, ethylbenzene, toluene, and xylene (BETX) compounds differ slightly for United States Environmental Protection Agency (EPA) methods 8020 and 8260. For discussion purposes, the greater of the two values are used.

While the water samples were not collected from a public water source, the California maximum contaminant levels (MCLs) are presented for comparison purposes with the detected concentrations.

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2.2.1 Chlorinated Organics

Chlorinated VOC detections have been found in monitoring wells.

2.2.1.1 Trichloroethene (TCE)

Throughout the period of record MW-1 and MW-2, which are on the upgradient part of the facility, have consistently shown TCE detections, ranging from 5 to 29 microgram/liter (μ g/l).

The Department of Toxic Substance Control information indicates that TCE is a widely occurring VOC found in the shallow ground water in the San Leandro area (WCC, 1993). Given this information and the occurrences in upgradient wells, it is likely that the TCE-impacted ground water detected in MW-1 and MW-2 is flowing onto the facility from an upgradient source.

By agreement with Alameda County, these wells have not been sampled since the January 1995 event.

Analytical results from MW-4 and OB-1 continue to indicate TCE detections of 8 and 55 μ g/l, respectively. Previous detections in these wells ranged from 14 to 66 μ g/l. MW-4 and OB-1 are on the downgradient side of the facility. The TCE detections have at least two possible source areas: 1) the continuation of the TCE-impacted ground water observed in the upgradient wells MW-1 and MW-2 and 2) a localized, undocumented release. While the facility formerly used a TCE parts cleaner, there are no soil sampling observations or analytical results to suggest an undocumented release on the property.

No TCE was detected in the sampling of VW-5, VW-6, VW-8, or VW-9.

The California MCL for trichloroethene is 0.005 mg/l or 5 μ g/l.

2.2.1.2 -- 1,2-Dichloroethene

Cis-1,2-dichloroethene was detected in OB-1 at 12 μ g/l. Previous detections in OB-1 ranged from 6.7 to 9 μ g/l. Potential sources of these low concentrations include breakdown products of TCE and as a manufacturing artifact of TCE.

Cis-1,2-dichloroethene was detected in VW-9 at 6 μ g/l.

The California MCL for cis-1,2-dichloroethylene is 0.006 mg/l or 6 μ g/l.

Trans-1,2-dichloroethene was detected in OB-1 at 15 μ g/l. Previous detections in OB-1 ranged from 8 to 15 μ g/l. Potential sources of these concentrations include breakdown products of TCE and as a manufacturing artifact of TCE.

The California MCL for trans-1,2-dichloroethylene is 0.010 mg/l or 10 μ g/l.

2.2.1.3 Chlorobenzene

In previous sampling events, chlorobenzene detections in MW-3 ranged from 17 to 19 μ g/l. During the June 1995 event, chlorobenzene was not detected. Typical uses for the compound include, as a solvent, heat transfer and in the production of pesticides (Sax and Lewis, 1987).

The California MCL for monochlorobenzene (chlorobenzene) is 0.030 mg/l or 30 μ g/l.

2.2.1.4 Dichlorobenzene Isomers

The three isomers of dichlorobenzene were detected in MW-3 in concentrations ranging from 9 to 58 μ g/l. Previous detections ranged from 7 to 64 μ g/l. The three isomers: 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene have a wide variety of uses including solvent, dye manufacturing, insecticides, and industrial odor control. 1,3-dichlorobenzene and 1,4-dichlorobenzene are generally used in fumigants and insecticides (Sax and Lewis, 1987).

During the June 1995 event, 1,4-dichlorobenzene was detected at 17 μ g/l in MW-3. Previous detections ranged from 11 to 18 μ g/l. 1,3-dichlorobenzene was detected at 9 μ g/l in MW-3. Previous detections ranged from 6.6 to 9 μ g/l. 1,2-dichlorobenzene was detected at 58 μ g/l in MW-3. Previous detections ranged from 42 to 64 μ g/l.

There were no dichlorobenzene isomers detected in the VW-5, VW-6, VW-8 or VW-9.

- 1,4-dichlorobenzene has a California MCL which is .005 mg/l or 5 μ g/l.
- 1,2-dichlorobenzene has a proposed California MCL which is 0.6 mg/l or 600 μ g/l. There is no California MCL for 1,3-dichlorobenzene.

2.2.1.5 -- 1,2 Dichloroethane

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During the June 1995 event 1,2 dichloroethane was detected at 11 μ g/l in MW-3. There has been one other occurrence in MW-3 during the November 1990 sampling when 11 μ g/l was detected. Typical uses for the compound include as a solvent and as a lead scavenger in antiknock gasoline.

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1,2 dichloroethane was detected in VW-8 and VW-9 at 6 and 33 μ g/l, respectively.

The California MCL for 1,2 dichloroethane is 0.0005 mg/l or 0.5 μ g/l.

2.2.2 Aromatic Organics

During the June 1995 event, several gasoline component VOCs continue to be detected in samples from monitoring wells MW-3, MW-4, and OB-1. Additionally, several gasoline component VOCs were detected in VW-8 and VW-9. No gasoline component VOCs were detected in VW-5 or VW-6. Each detected VOC is discussed below.

2.2.2.1 Benzene

During the June 1995 event, benzene was detected in MW-3 at $16 \mu g/l$. Previous benzene concentrations ranged from $9 \mu g/l$ in October 1994 to $1,200 \mu g/l$ in April 1995. (This two order of magnitude fluctuation may be due to the higher water table earlier in the 1995 and accompanying flushing of residual gasoline in soils in the area of MW-3, which is near the former gasoline underground storage tank [UST] site.) In the June 1995 event, both a lower benzene concentration and lower water level elevation were measured in MW-3.

Benzene was detected in MW-4 at 600 μ g/l. MW-4 concentrations have been fairly steady throughout 1994 and early 1995, ranging from 260 to 500 μ g/l. A sample from late 1990 reported 1,500 μ g/l.

Benzene was also detected in VW-8 and VW-9 at concentrations of 280 and 7,500 μ g/l, respectively. The VW-9 concentration is the highest for any sampling point for the period of record.

The California MCL for benzene is 0.001 mg/l or 1 μ g/l.

2.2.2.2 Ethylbenzene

Ethylbenzene is another gasoline constituent detected in MW-3, MW-4, and OB-1. During the June 1995 event, concentrations ranged from 17 to 570 μ g/l. During the June event, the highest concentration was found in MW-4.

The ethylbenzene concentration detected in MW-3 was 20 μ g/l. Historically, MW-3 ethylbenzene concentrations ranged from 80 to 720 μ g/l.

During the June 1995 event, the benzene concentration in MW-4 was 570 μ g/l. Previous detections ranged from 230 to 720 μ g/l.

Ethylbenzene was also detected in VW-8 and VW-9 at concentrations of 230 and 1,100 μ g/l, respectively.

The California MCL for ethylbenzene is 0.680 mg/l or 680 μ g/l.

2.2.2.3 Toluene

Toluene detections in MW-3, MW-4, and OB-1 were 1.7, 18, and 7 μ g/l, respectively.

Previous detections in MW-3 have ranged from 4 to 1,700 μ g/l. The June 1995 concentration of 1.7 μ g/l is the lowest detected during the period of record. This follows the January and April 1995 results of 410 and 1,700 μ g/l, which were the highest for the period of record. The three quarterly events are similar to increasing and decreasing benzene and xylene concentrations and support the concept of flushing of residual gasoline in unsaturated soils during the late 1994 to early 1995 period of high rainfall.

Toluene concentrations in MW-4 range from 19 to 110 μ g/l. The 19 μ g/l detected during the June 1995 event was similar to the 17 μ g/l detected in the April 1995 event.

Toluene concentrations in OB-1 range from non detection to 39 μ g/l. The 7 μ g/l detected in the June 1995 event was similar to the 3.4 μ g/l detected in the April 1995 event.

Toluene was also detected in VW-8 and VW-9 at concentrations of 570 and 3,500 μ g/l, respectively.

2.2.2.4 Isomers of Xylene

All three isomers of xylene were detected in MW-3, MW-4, and OB-1 during the June 1995 event.

In MW-3, o-xylene was detected at 33 μ g/l. Previous MW-3 concentrations of o-xylene ranged from 31 to 940 μ g/l with the highest value occurring during the April 1995 sampling event. In MW-3, p and m-xylenes were detected at 99 μ g/l. Previous MW-3 concentrations of p and m xylenes ranged from 100 to 2,100 μ g/l with the highest value also occurring during April 1995. The higher xylene concentrations appear to be the result of flushing of residual gasoline from the soil in the MW-3 area.

Xylene isomer concentrations were slightly higher in MW-4 compared to the April 1995 event; o-xylene was detected at 74 μ g/l. Previous MW-4 concentrations ranged from 50 to 320 μ g/l for o-xylene; p and m-xylenes were detected at 520 μ g/l. Previous MW-4 concentrations ranged from 270 to 730 μ g/l.

Xylene isomers were detected in VW-8 and VW-9 during the June 1995 event, and also o-xylene was detected at VW-8 and VW-9 at concentrations of 130 and 1,200 μg/l. respectively. In VW-8 and VW-9, p and m xylenes were detected at concentrations of 210 and 2,400 μ g/l, respectively.

The California MCL for xylenes is 1.75 mg/l or 1750 μ g/l for either a single isomer or the sum of the isomers.

2.2.2.5 Napthalene

This gasoline component has been detected in MW-3, MW-4, and OB-1.

During the June 1995 event, napthalene was detected at 14 μ g/l in MW-3. Previous MW-3 concentrations ranged from 18 to 150 μ g/l. The April 1995 event sample detected 150 μ g/l. As with the BETX compounds, the decreased napthalene concentration appears associated with flushing of residual gasoline in the MW-3 area.

The MW-4 concentration was 98 μ g/l. Previous MW-4 concentrations range from 46 to 120 μ g/1.

Napthalene was also detected in VW-8 and VW-9 at concentrations of 46 and 240 μ g/1.

2.2.2.6 Trimethylbenzene

Both 1,2,4 and 1,3,5 trimethylbenzene occur in MW-3, MW-4, and OB-1.

In MW-3, 1,2,4 trimethylbenzene was detected at 54 μ g/l during the June 1995 event. Previous MW-3 concentrations range from 120 to 650 μ g/l. In MW-3, 1,3,5 trimethylbenzene was detected at 40 µg/l. Previous MW-3 concentrations range from 22 to 160 μ g/l. As with the BETX compounds, the decreased trimethylbenzene concentrations appear to be the response to flushing of soil near the MW-3 area.

During the June 1995 event, 1,2,4 trimethylbenzene was detected at 690 μ g/l in MW-4. Previous MW-4 concentrations range 300 to 600 μ g/l. In MW-4, 1,3,5 trimethylbenzene was detected at 130 μ g/l. Previous MW-4 concentrations range from 100 to 120 μ g/l.

During the June 1995 event, 1,2,4 trimethylbenzene was detected in OB-1 at 8 μ g/l.

In VW-8 and VW-9, 1,2,4 trimethylbenzene was detected at 270 and 650 μ g/l, respectively. In VW-8 and VW-9, 1,3,5 trimethylbenzene was detected at 61 and 190 μ g/l, respectively.

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2.2.2.7 Other Gasoline Components

Throughout the period of record, a number of other gasoline related VOCs have also been detected in MW-3, MW-4, and OB-1. Concentrations of n-butylbenzene, isopropylbenzene (cumene), sec-butylbenzene, and n-propylbenzene have been detected during the sampling events.

During the June 1995 event, these VOCs were detected in concentrations similar to those of previous sampling events. Most concentrations are $100 \mu g/l$ or less. Additionally, these four benzene compounds were detected in VW-8 and VW-9 during the June 1995 event. The highest concentration was $120 \mu g/l$ of n-propylbenzene in VW-9. The other detected concentrations were less than $100 \mu g/l$.

2.2.2.8 Total Petroleum Hydrocarbons (TPH) as Gasoline

During the June 1995 event, TPH as gasoline was detected at 1,600 μ g/l in MW-3. Previous detections ranged from 2600 to 14,000 μ g/l. The 14,000 μ g/l was detected during the April 1995 event. This order of magnitude decrease from the April to the June sampling is consistent with the BETX compound decrease previously discussed and likely results from less residual gasoline flushing from the soil in the MW-3 area.

In MW-4 and OB-1, concentrations for TPH were 7,800 and 2,600 μ g/1, respectively.

For the period of record, MW-4 concentrations ranged from 7,600 to 9,700 μ g/l. The highest concentration occurred in the January 1995 result. Concentrations for OB-1 ranged from 1,600 to 3,900 μ g/l. The highest concentration occurred in the January 1995 sample.

During the June 1995 event, TPH as gasoline in VW-8 and VW-9 were 5,300 and 32,000 μ g/l, respectively.

3.0 ADDITIONAL GROUND WATER ASSESSMENT

This portion of the October Report summarizes the activities associated with the additional ground water assessment that was conducted during the summer of 1995.

3.1 BACKGROUND

In late June and early July 1995, Capsule and selected contractors conducted additional ground water assessment activities both at and downgradient of the I-R facility. The assessment was called for by Alameda County in a telephone meeting on March 2, 1995. A scope of work for the assessment was submitted to Alameda County on April 25, 1995, by Capsule. The scope of work was approved by Alameda County on June 2, 1995.

3.2 ASSESSMENT ACTIVITY SUMMARY

The additional ground water assessment activities included:

- Obtaining access to adjacent property for the installation of ground water sampling points
- Clearing utilities and obtaining drilling permits
- Installing, logging, and ground water sampling of 12 points
- Abandonment of sampling locations
- Laboratory analysis of ground water samples
- Ground water sampling of selected SVE vents (vent wells)
- Surveying of selected measuring points for elevation

Implementation activities for the scope of work began with Capsule arranging for access agreements with adjacent property owners for the installation of temporary ground water sampling points (see Figure 5). Access agreements were arranged with 4M Manufacturing and Mark Container. 4M Manufacturing operates a manufacturing facility immediately to the west and hydraulically downgradient from the I-R facility. Mark Container's manufacturing facility is north, across a set of railroad tracks, from the western half of the I-R facility. Access was obtained to Mark Container as a contingency. In the likelihood that probe sampling results indicated an unexpected flow direction to the northwest, Mark Container property was to be the site of additional sampling. Attempts were also made to gain access to the track area, belonging to the Southern Pacific Railroad immediately north of the I-R facility. The attempts were unsuccessful. An attempt was also made during the field activities to gain access to the Case facility to the north. This attempt was also unsuccessful.

Field activities began with the staking of ground water sampling locations. Thirteen sampling locations were marked after meeting with and discussing the proposed locations with the 4M Manufacturing plant manager and the I-R operations manager (see Figure 5 for sampling locations). Points along the west side of 4M Manufacturing had to be moved to the west approximately 50 feet from their proposed scope of work locations. This was necessary due to heavy truck and forklift traffic and material stockpiling around the proposed locations. Otherwise, only minor adjustments to the proposed scope of work locations had to be made, due to obstacles, such as factory machinery and materials storage. Subtronics, a Berkeley-based utility locating service, provided utility clearance for the proposed sampling locations.

Gregg Drilling, Martinez, California, provided the personnel and soil probing equipment for the sampling probe installation. Their equipment was a Geoprobe brand, GP-40 model. The Geoprobe sampling method is a hydraulically-powered, percussion probing technique. The sampling tool is advanced by using the static weight of the vehicle and percussion.

Eight of the probe locations were sampled continuously from the surface to approximately 20 feet. At four locations only the lower portions of the probe boring were logged. This was done in certain areas to minimize potential disruption to industrial activities and where there was already sufficient lithologic information.

The sampler was advanced in two foot increments. The advancing sampler collected soil cores inside 6-inch brass liners. Upon retrieval, a portion of the sample was used to measure a headspace reading with a HNu photoionization detector. The remainder of the sample was logged by a Capsule geologist for lithology. Prior to each sampling run, the sampler was cleaned with an Alcanox solution and rinsed. Four sample probes were available to minimize cleanup time.

Probing was performed until the water table was encountered. Once the water table was reached, a ground water sample was either collected with a small diameter stainless steel bailer, or a temporary well was constructed from new 3/4-inch PVC well screen and riser pipe. Upon completion of the sampling, the probe holes were backfilled with bentonite pellets and capped with either concrete or fill, depending on the original surface.

After collection, samples were labeled, packed for shipment in a cooler, and kept chilled to 4 degrees Celsius. A chain of custody was prepared. A trip blank accompanied each cooler. Field blanks were prepared by pouring distilled water through the cleaned, stainless steel bailer. Samples were delivered to Clayton Environmental Consultants, Pleasanton, California, each day. During the first and second day, samples were expedited for quick analysis so that findings would be available for work planning. Based upon sampling results from the first two days, GP-3 was not installed.

Clayton's laboratory analyzed the samples by EPA Method 8260 and EPA Method 8015/8020. These methods were selected for consistency with the quarterly sampling. At the Geoprobe location GP-4 there was insufficient water to collect samples for both methods, even after more than one day's recharge into the probe hole. As a result, GP-4 analysis was by EPA Method 8015/8020 only.

As part of the quarterly sampling conducted on June 30, 1995, and continued on July 27, 1995, samples were collected from vents VW-5, VW-6, VW-8, and VW-9 to provide additional ground water level and quality information for the assessment. Temporary measuring points were established on the top of the vents and depths to water measured. Samples were collected from VW-5 and VW-6 on June 30, 1995. Samples were collected from VW-8 and VW-9 on July 27, 1995. All samples were analyzed by EPA Method 8260 and EPA Method 8015/8020.

The surveying firm, Moran Engineering, Berkeley, California, determined the vertical and horizontal positions of vents VW-5, VW-6, VW-8, and VW-9 and the three on-site Geoprobe locations GP-1, GP-2, and GP-13.

3.3 ASSESSMENT FINDINGS

3.3.1 Geology

The boring logs from the Geoprobe installation are in Appendix C.

The Geoprobe borings indicated layered, unconsolidated sediments, comprised of clay, silt, and sand ranging from very fine to medium to some coarse grained in the first 20 feet. Previous investigators have classified these sediments as fluvial deposits (Hickenbottom and Muir, 1988). Additionally, similar to previous borings, a dense, gray clay was observed near 20 feet below land surface.

3.3.2 Ground Water Flow

Vent water levels, for VW-8 and VW-9 along with MW-4 were also used to develop a characterization of ground water flow direction and gradient near the area of additional investigation. The water level data are summarized in Table 2.

Vents VW-8 to VW-9 are approximately 75 feet apart and 65 to 70 feet from GP-2. Within the triangular area formed by VW-8, VW-9, and MW-4, a hydraulic gradient was calculated to be 0.003 ft/ft. This gradient is similar to that for the facility. (See section 2.1.1 and 2.1.2.) The ground water flow direction to the southwest is very similar to that shown in Figure 4 for the facility. Appendix E contains the calculations for the hydraulic gradient and flow direction.

3.3.3 Ground Water Quality

The analytical data package including results and chains of custody are included as Appendix D.

During the Geoprobe field work, gasoline free product sheens and gasoline odors were observed in four Geoprobe locations: GP-1, GP-2, GP-5, and GP-10. Additionally, analytical results detected one or more of the gasoline constituents in GP-7, GP-4, GP-11, and GP-12. (The GP-12 results were at or very near the method detection limits.) Samples were collected but not analyzed from GP-5 and GP-10 because of the obvious sheens and gasoline odors. The analytical results are presented in Table 4.

Three chlorinated solvent detections are indicated by the EPA 8260 analyses. In GP-7, 1,1,1 trichloroethane was detected at 7 μ g/l. In GP-8, 1,1 dichloroethene and 1,1,1 trichloroethane were detected at 14 μ g/l and 41 μ g/l, respectively. Trichloroethene was detected in GP-13 at 18 μ g/l. Neither 1,1,1 trichloroethane or 1,1 dichloroethane have been

detected during the period of record for the facility monitoring. Historically, there have been detections of trichloroethene in the upgradient well MW-1, which is near GP-13.

The Geoprobe ground water sampling and the June 1995 event results were used to prepare two figures. Figure 6 is a generalized concentration map showing TPH as gasoline. The $10,000~\mu g/l$ TPH contour forms a discontinuous lobe trending generally northeast to southwest with the highest level found in GP-2 near the northwest corner of the I-R facility. Figure 7 is a contour map depicting the sum of the BETX (from Method 8020) compounds at each ground water sample location.

4.0 <u>CONCLUSIONS</u>

The conclusions combine observations, data, and evaluation for both the June 1995 sampling event, past site work data, and the additional ground water assessment activities of June and July 1995. Publicly available hydrogeologic and ground water contamination studies were also used in the evaluation.

The shallow geologic setting beneath the facility is a sequence of fill, silts, clays and sands that have been mapped as fluvial deposits. The depth to ground water is 12 to 15 feet.

The shallow ground water flows through a sequence of saturated sands, silts, and clays. During the June 1995 sampling, the ground water gradient was 0.005 feet. The water table elevation is 11.4 to 13.0 feet above sea level, and its velocity is approximately 55 feet per year. Flow is to the southwest.

As of the end of June 1995, ground water elevations in facility monitoring wells have declined 1.2 to 1.6 feet from the period of record highs that occurred in January 1995. June water levels were still above levels measured prior to January 1995.

Seasonally, ground water levels in facility monitoring wells respond fairly uniformly. This supports the conclusion of a fairly consistent flow direction to the southwest.

Gasoline constituent and some chlorinated VOCs continue to be detected in monitoring wells.

BETX constituents from the monitoring well MW-3, near the former UST, decreased by an order of magnitude from January and April levels. The earlier increases and the June decrease is likely due to infiltrating precipitation flushing residual gasoline and rising water levels into sediments with residual gasoline.

The additional ground water assessment identified an area of gasoline-related impacts in the far northwest corner of the facility. The ground water flow gradient and direction make it unlikely that the MW-3 area impacts, and the northwest corner impacts are from a common source. A review of the San Leandro Fire Department's files did not provide possible upgradient sources for the observed gasoline-related impacts.

Off-site access was sought but was not available to install additional sampling points upgradient of the northwest corner impacted area.

Gasoline constituents were detected in four ground water sampling points downgradient of the facility.

Both chlorinated and gasoline constituent VOCs continue to be detected in the wells near the facility's downgradient boundary.

5.0 ACTIVITIES STATUS SUMMARY

The following corrective action activities are either in progress or planned for the coming months.

Construction work began on the expanded SVE system on September 11, 1995. Vents VW-3, VW-4, VW-5, VW-6, and VW-9 were hooked up to the system. The expanded system was started up during the week of October 2, 1995.

Following startup, the system is being operated, monitored, and maintained to remove VOCs in the soil. System performance reporting will be included in future quarterly reports.

The next quarterly ground water sampling event is scheduled for October. Results will be submitted as part of the January 1996 quarterly report.

Work will begin on the corrective action plan. The plan will include the results of the first quarter operation of the SVE system.

6.0 RECOMMENDATIONS

6.1 RECOMMENDATION 1

The ground water sampling results indicate that residual gasoline remains in the soil near MW-3. The recent redesign and SVE construction activity is completed and the system has been operational since early October 1995. The SVE should be operated to remove the residual gasoline in the soil. This recommendation recognizes the technological limitations in removing that portion of hydrocarbons that are held in either adsorbed or capillary phases. Total removal is generally not technically feasible.

The system should be operated as much as possible, recognizing the operational constraints of the air permit conditions, including the requirement to do daily air monitoring of the system. This requirement limits system operation to the business work week.

Rev 0

6.2 <u>RECOMMENDATION 2</u>

Quarterly sampling should be continued quarterly through the June 1996 event. At that time, an evaluation of the sampling program should be performed and appropriate modifications, if any, offered in a letter type report to Alameda County.

6.3 RECOMMENDATION 3

Vent well VW-8 should be added to the monitoring program. The well should be added to the quarterly sampling schedule. Sampling of OB -1 should be discontinued.

6.4 RECOMMENDATION 4

Given the gasoline-related impacts in the northwest corner of the property and the proximity of these impacts to the property line, it appears that there may be an off-site source for the observed impacts. During the additional assessment, I-R's consultant attempted and were unable to obtain access to conduct investigation activities upgradient of this impacted area.

Given these circumstances, no further investigation activities are planned for this impacted area.

7.0 REFERENCES

Alameda County, 1995, faxed precipitation data from the Alameda County Flood Control and Water Conservation District, Water Resources Section, Oakland, California.

Hickenbottom, K. and Muir, K., Geohydrology and Ground water-Quality Overview of the East Bay Plain Area, Alameda County, California 2005 (j) Report, Alameda County Flood Control and Water Conservation District, Oakland, California.

IT Corporation, 1990, I-R Corporation Data Summary Report, Subject Site: 1944 Marina Boulevard, San Leandro, California, Martinez, California.

IT Environmental Services, 1989, Problem Assessment Report, prepared for I-R Incorporated, Martinez, California.

Sax, N.I, and R. J. Lewis, 1987, Hawley's Condensed Chemical Dictionary, Van Nostrand Reinhold, New York.

Woodward-Clyde Consultants, 1993, Hydrogeology of Central San Leandro and Remedial Investigation of Regional Ground water Contamination San Leandro Plume, San Leandro, California, prepared for the California Environmental Protection Agency, Oakland, California.

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106 MALIFINE N

AUG 3 1 1995

HARSULE

Clayton ENVIRONMENTAL CONSULTANTS

ID#:	
SERVICE:	
BG, CF, CO, MT, PL	
CORRESPONDENCE	······

August 29, 1995

Mr. Jay S. Mattsfield CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 213 St. Paul, Minnesota 55113-2624

Clayton Project No. 60899.02

Subject:

Analytical results of monitoring wells at the Ingersoll-Rand facility in San

Leandro, California

Dear Mr. Mattsfield:

Clayton Environmental Consultants, Inc. is pleased to present the enclosed analytical results for the groundwater sampling event conducted on July 27, 1995 at the Ingersoll-Rand facility located at 1944 Marina Boulevard in San Leandro, California. Also included are the updated analytical results for the groundwater sampling event conducted on June 30, 1995.

Groundwater samples were collected from monitoring wells VW-8 and VW-9. Prior to sampling the static water depths were measured and 4 to 5 casing volumes of water were purged according to standard Clayton Sampling Protocol. One Department of Transportation (DOT) approved 55-gallon drum was left onsite to store the purge water. Upon completion of well sampling a sample from the purge drum was collected to characterize the purge water.

Groundwater samples from monitoring wells VW-8 and VW-9 were analyzed using Environmental Protection Agency (EPA) Method 8260 for volatile organic compounds (VOCs), Method 8015 modified for gasoline, and EPA 8020 for benzene, toluene, ethylbenzene, and xylenes (BTEX).



Mr. Jay S. Mattsfield CAPSULE ENVIRONMENTAL ENGINEERING July 24, 1995

Page 2 Clayton Project No. 60899.02

In addition, water levels were taken for the following wells:

Well Number	Time	Water Level
MW-3	1352	15.79 ft.
MW-4	1348	17.93 ft.
VW-5	1342	22.02 ft.
VW-6	1345	20.98 ft.
VW-8	1208	22.77 ft.
VW-9	1255	23.40 ft.

Attachment 1 includes laboratory reports detailing the analyses conducted for water samples collected from monitoring wells VW-8 and VW-9. Attachment 2 includes well field sampling forms describing the sampling of the wells and depth to water measurements. The sampling protocols used for sample collection is included in Attachment 3.

If you have any questions regarding the sampling event, please call me at (510) 426-2676 or Richard Silva at (510) 426-2670.

NO. 5046

Sincerely,

John F. Värgas, R.

Supervisor, Geosciences and Remediation

Western Operations

JFV/rjs Enclosures

ACTIVE\L6089902.241



ATTACHMENT 1

ANALYTICAL RESULTS

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



August 10, 1995

Mr. John Vargas CLAYTON ENVIRONMENTAL CONSULTANTS, INC. 1252 Quarry Lane Pleasanton, CA 94566

> Client Ref.: 60899.02 Clayton Project No.: 95072.57

Dear Mr. Varga:

Attached is our analytical laboratory report for the samples received on July 28, 1995. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after September 9, 1995, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH Director, Laboratory Services San Francisco Regional Office

HAH/tjb

Attachments



Page 2 of 19

07/27/95

07/28/95

Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: VW-8

Lab Number:

9507257-01A WATER

Sample Matrix/Media: Preparation Method:

Method Reference:

EPA 5030A

EPA 8260A

Date Sampled:

Date Received: Date Prepared:

07/28/95 Date Analyzed:

Analyst:

07/28/95 JP

	Method
	Detection
Concentration	7 imit

Analyte	CAS #	(ug/L)	(ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	260	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
- Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	9	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
■ Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
■ Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5 5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	6	5
■ 1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156~60-5	ND	5



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95072.57

Sample Identification: VW-8

Lab Number:

Sample Matrix/Media:

Preparation Method: Method Reference:

9507257-01A

WATER EPA 5030A

EPA 8260A

Date Sampled: Date Received:

Date Prepared:

Date Analyzed: 07/28/95

Analyst:

07/27/95

07/28/95

07/28/95

JP

Method Detection

Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)
Volatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6	ND ND ND ND ND ND ND ND ND ND ND ND ND N	555555555555555555555555555555555555555
1,1,2-Trichloroethane Trichloroethene	79-00-5 79-01-6	ND ND	5 5
Trichlorofluoromethane 1,2,3-Trichloropropane	75-69-4 96-18-4	ND ND	5 5

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Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 60899.02
Clayton Project No. 95072.57

ample Identification:	VW-8	Date	Sampled:	07/27/95
Lab Number:	9507257-01A	Date	Received:	07/28/95
Sample Matrix/Media:	WATER	Date	Prepared:	07/28/95
reparation Method:	EPA 5030A	Date	Analyzed	07/28/95

Method Reference: EPA 8260A Analyst: JP

	•		
nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con	tinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes Surrogates	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	270 61 ND ND 130 210 Recovery (%)	5 5 10 5 5 5 5 OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	103 95 100 100	86 - 115 86 - 118 76 - 114 88 - 110

P: Not detected at or above limit of detection Information not available or not applicable



November 22, 1995

Mr. Scott Seery, CHMM Alameda County Health Care Services Agency Environmental Protection Division Room 250 1131 Harbor Bay Parkway Oakland, California 94502

Dear Mr. Seery:

On behalf of Ingersoll-Rand Equipment Sales, Capsule Environmental Engineering, Inc., and our project partner, Braun Intertec Corporation, would like to submit the enclosed report, Quarterly Report October 1995. This report is part of Ingersoll-Rand Equipment Sales' corrective action activities to address the underground storage tank leak at 1944 Marina Boulevard, San Leandro, California.

The Quarterly Report October 1995 was prepared to summarize the monitoring and remediation activities for the period from June through October 1995. The report also summarizes the activities and findings for the additional investigation that was requested by Alameda County in March 1995.

If you have any questions, comments, or need additional information cited in the report, please contact John McDermott at (800) 328-8246.

Sincerely,

John J. McDermott

Hydrogeologist Capsule Environmental Engineering, Inc.

Gerald E. Stuth. P.E. Senior Project Manager **Braun Intertec Corporation**

JJM:mmf

cc/enc:

L. Feldman/Regional Water Quality Control Board, Oakland, CA

R. Heindl/Ingersoll-Rand Equipment Sales, Bethlehem, PA

A. Aguirre/Ingersoll-Rand Equipment Sales, San Leandro, CA

M. Bakaldin/San Leandro Fire Department, San Leandro, CA



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07/27/95

07/28/95

Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95072.57

Sample Identification: VW-9

Lab Number:

Sample Matrix/Media:

Preparation Method:

Method Reference:

9507257-02A

WATER EPA 5030A

EPA 8260A

Date Sampled:

Date Received: Date Prepared:

07/28/95 Date Analyzed: 07/28/95

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotoluene 4-Chlorotoluene 4-Chlorotoluene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4	ND 6600 ND	055555555555555555555555555555555555555
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	156-59-2 156-60-5	6 ND	5 5 5



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: VW-9

Lab Number: 9507257-02A

Sample Matrix/Media: Preparation Method:

WATER

Method Reference:

EPA 5030A

EPA 8260A

Date Sampled:

07/27/95 Date Received: 07/28/95

Date Prepared: 07/28/95 Date Analyzed: 07/28/95

Analyst: JΡ

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Conti	nued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene styrene tert-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichloroethene Trichloroethene Trichlorofluoromethane 1,2,3-Trichloropropane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5 79-01-6 75-69-4 96-18-4	ND N	55555555555555555555555555555555555555



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: VW-9 Date Sampled: 07/27/95 Lab Number: 9507257-02A Date Received: 07/28/95 Sample Matrix/Media: WATER Date Prepared: 07/28/95 Preparation Method: EPA 5030A Date Analyzed: 07/28/95 Method Reference: EPA 8260A Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Compounds (Compo	ntinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	650 190 ND ND 1100 1900	5 5 10 5 5 5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	97 101 108 110	86 - 115 86 - 118 76 - 114 88 - 110

Not detected at or above limit of detection Information not available or not applicable



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: DS-5

Lab Number:

9507257-03A WATER

Sample Matrix/Media:

Preparation Method:

EPA 5030A

Date Sampled: Date Received: 07/27/95 07/28/95

Date Prepared:

07/28/95

Date Analyzed:

07/28/95

Me CHOa	Reference:	EPA 826UA	Analyst:	40

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane 2-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8	ND N	0 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5	ND N	555555555555555555



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95072.57

Sample Identification: DS-5

Lab Number:

9507257-03A

Sample Matrix/Media:

WATER

Preparation Method:

EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received:

07/27/95 07/28/95

Date Prepared:

07/28/95

Date Analyzed:

07/28/95

Analyst:

JP

			Method
			Detection
		Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)

Analyte	CAS #	(ug/L)	Limit (ug/L)
Volatile Organic Compounds (Con-	tinued)		
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5 5
	594-20-7	ND	5
2,2-Dichloropropane 1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5 5
trans-1,3-dichloropropene	10061-02-6	ND	
Ethylbenzene	100-41-4	ND	5
116011115	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone Isopropylbenzene	591-78-6	ND	20
_	98-82-8	ND	5
p-Isopropyltoluene	99-87-6	ND	5
methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
- Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	. 5
sec-Butylbenzene	135-98-8	ND	5
■ Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5 5
Toluene	108-88-3	ND	
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5 5 5
1,2,3-Trichloropropane	96-18-4	ND	5



Date Sampled:

Page 10 of 19

07/27/95

Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 60899.02
Clayton Project No. 95072.57

Lab Number: 9507257-03A Date Received: 07/28/95 Sample Matrix/Media: WATER Date Prepared: 07/28/95 Preparation Method: EPA 5030A Date Analyzed: 07/28/95 Method Reference: EPA 8260A Analyst: JP Method Detection Concentration Limit Analyte CAS # (ug/L) (ug/L) Volatile Organic Compounds (Continued) 1,2,4-Trimethylbenzene 95-63-6 ND 5 1,3,5-Trimethylbenzene 108-67-8 ND 5 Vinyl acetate 108-05-4 ND 10 Vinyl chloride 75-01-4 ND 5 o-Xylene 95-47-6 5 ND p,m~Xylenes ND 5 Burrogates Recovery (%) OC Limits (%) 4-Bromofluorobenzene 460-00-4 104 86 - 115 Dibromofluoromethane 1868-53-7 104 86 - 118 1,2-Dichloroethane-d4 17060-07-0 108 76 - 114 Toluene-d8 2037-26-5 98 88 - 110

D: Not detected at or above limit of detection Information not available or not applicable

Sample Identification: DS-5

Page 11 of 19

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: METHOD BLANK

Lab Number:

9507257-05A

Sample Matrix/Media: Preparation Method:

WATER

Method Reference:

EPA 5030A

EPA 8260A

Date Prepared: 07/28/95 Date Analyzed:

Analyst:

07/28/95

JΡ

Date Sampled:

Date Received:

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	
Bromodichloromethane	75-27-4	ND	5 5 5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride Chlorobenzene	56-23-5	ND	5
Chloroethane	108-90-7	ND	5
Chloroform	75-00-3 67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95 - 49-8	ND ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
■ 1,2-Dibromoethane	106-93-4	ND	5 5
Dibromomethane	74-95-3	ND	5 5
1,2-Dichlorobenzene	95-50-1	ND	5
_ 1,3-Dichlorobenzene	541-73-1	ND	ς ς
1,4-Dichlorobenzene	106-46-7	ND	ر بر
Dichlorodifluoromethane	75-71-8	ND	5 5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5 5 5 5 5 5 5 5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: METHOD BLANK

Lab Number:

9507257-05A

Sample Matrix/Media:

WATER

Preparation Method:

EPA 5030A

Method Reference:

EPA 8260A

Date Sampled:

Date Received:

Date Prepared: 07/28/95 Date Analyzed: 07/28/95

Analyst:

JP

Volatile Organic Compounds (Continued) 1,2-Dichloropropane	Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
1,3-Dichloropropane 142-28-9 ND 5 2,2-Dichloropropane 594-20-7 ND 5 1,1-Dichloropropene 563-58-6 ND 5 cis-1,3-dichloropropene 10061-01-5 ND 5 trans-1,3-dichloropropene 10061-02-6 ND 5 Ethylbenzene 100-41-4 ND 5 Freon 113 76-13-1 ND 5 Hexachlorobutadiene 87-68-3 ND 5 2-Hexanone 591-78-6 ND 20 Isopropylbenzene 98-82-8 ND 5 p-Isopropyltoluene 99-87-6 ND 5 Methylene chloride 75-09-2 ND 5 4-Methyl-2-pentanone 108-10-1 ND 20 Naphthalene 91-20-3 ND 5 n-Propylbenzene 103-65-1 ND 5 sec-Butylbenzene 103-65-1 ND 5 Styrene 100-42-5 ND 5 tert-Butylbenzene 98-06-6 ND 5 1,1,2,2-Tetrachloroethane 630-20-6 ND 5 Tetrachloroethene 127-18-4 ND 5 Toluene 108-88-3 ND 5	Volatile Organic Compounds (Cont	inued)		
1,1,1-Trichloroethane	1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1	ND N	5 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	1,1,2-Trichloroethane Trichloroethene	79-00-5 79-01-6	ND ND	5 5 5 5

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: METHOD BLANK Date Sampled: --Lab Number: 9507257-05A Date Received: --

Sample Matrix/Media: WATER Date Prepared: 07/28/95
Preparation Method: EPA 5030A Date Analyzed: 07/28/95

Method Reference:	EPA 8260A		Analyst:	JP
-Analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compo	unds (Continue	<u>ed)</u>		
1,2,4-Trimethylbenze: 1,3,5-Trimethylbenze: Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	ne ne	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND ND	5 5 10 5 5 5
Surrogates			Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-de Toluene-d8	ı	460-00-4 1868-53-7 17060-07-0 2037-26-5	104 97 106 98	86 - 115 86 - 118 76 - 114 88 - 110



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: VW-8

Lab Number:

Gasoline

urrogates

a, a, a-Trifluorotoluene

Sample Matrix/Media:

WATER

reparation Method: EPA 5030 Method Reference: EPA 8015 Method Reference:

9507257-01C

EPA 8015/8020

Date Sampled:

07/27/95 Date Received: 07/28/95 07/31/95

Date Prepared: Date Analyzed:

5300

92

Recovery (%) QC Limits (%)

07/31/95

50

50 - 150

Analyst: WAS

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene	71-43-2 100-41-4 108-88-3 95-47-6	280 230 570 89	0.4 0.3 0.3 0.4
p,m-Xylenes		180	0.4

98-08-8



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Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95072.57

Sample Identification: VW-9

Lab Number:

9507257-02C

Sample Matrix/Media: Preparation Method: WATER

Method Reference:

EPA 5030

EPA 8015/8020

Date Sampled:

07/27/95

Date Received: 07/28/95 Date Prepared: 07/31/95

Date Analyzed: 07/31/95

Analyst:

WAS

Analyte	CAS #	Concentration (ug/L)	Method Detectior Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	7500	0.4
Ethylbenzene	100-41-4	1100	0.3
Toluene	108-88-3	3500	0.3
o-Xylene	95-47-6	1200	0.4
p,m-Xylenes	·	2400	0.4
Gasoline		32000	50
Surrogates .		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	89	50 - 150



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50 - 150

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: METHOD BLANK Lab Number:

9507257-05A Sample Matrix/Media:

Preparation Method: Method Reference:

a,a,a-Trifluorotoluene

WATER EPA 5030

EPA 8015/8020

Date Sampled: Date Received: --

Date Prepared: 07/28/95 Date Analyzed: 07/28/95

Analyst: WAS

	2111 00137 0020		imidific.	W11D
Analyte	•	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline				
Benzene		71-43-2	ND	0.4
Ethylbenzene		100-41-4	ND	0.3
Toluene		108-88-3	ND	0.3
o-Xylene		95-47-6	ND	0.4
p,m-Xylenes			ND	0.4
Gasoline			ND	50
Surrogates			Recovery (%)	OC Limits (%)

98-08-8

85



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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95072.57

Sample Identification: DS-5

Date Sampled:

07/27/95

Lab Number:

9507257~03

Date Received: 07/28/95

Sample Matrix/Media:

WATER

Analyte	Concentration	Method Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Method Reference
Flash Point	>140 a		Degrees F		08/08/95		EPA 1010
Reactive Cyanide	<0.1	0.1	mg/L		08/01/95		EPA 335.2
Reactive Sulfide	<10	10	mg/L		08/07/95		SW 7.3.4.2
pH	7.4		S.U.	**	07/31/95		EPA 150.1

a Sample smoked at 160 degrees F, making identification of a flash impossible.



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95072.57

Sample Identification: METHOD BLANK Lab Number:

Sample Matrix/Media:

WATER

9507257-05

Date Sampled: Date Received: --

		Method Detection	L.	Date	Date	Prep	Method
Analyte	Concentration	Limit	Units	Prepared	Analyzed	Method	Reference
Reactive Cyanide	<0.1	0.1	mg/L		08/01/95		EPA 335.2
Reactive Sulfide	<10	10	mg/L		08/07/95		SW 7.3.4.2



Quality Assurance Results Summary

Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 95072.57

Clayton Project No. 95072.57

Clayton Lab Number:

LCS

Ext./Prep. Method: EF Date: 08

EPA7.3.4.2 08/07/95 HYW

Analyst: HYW Std. Source: BAKER 611700

Sample Matrix/Media:

WATER

Analytical Method: Instrument ID:

Instrumen
Date:
Time:
Analyst:
Units:

EPA7_3_4_2 00008 08/07/95 02:20 HYW mg/L

Anatyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD	UCL (%RPD)
REACTIVE SULFIDE	ND	54.4	50.4	93	51.2	94	93	65	120	1.6	20

Clayton Project No. 95072.57

Clayton Lab Number: Ext./Prep. Method: Date:

9507238-04A EPA5030 07/28/95

Analyst:

JΡ Std. Source: M950711-01W Sample Matrix/Media: WATER

Analytical Method: Instrument ID: Date: Time: Analyst:

Units:

0.8

20

EPA8260 02831 07/28/95 03:18 JP UG/L

Analyte	Sample Result	Spike Level	Hatrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	HSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
1,1-DICHLOROETHENE	DM	50.0	54 . 1	108	52.4	105	107	80	120	3,2	20
BENZENE	ND	50 .0	42.8	86	43.6	87	86	80	120	1.9	20
CHLOROBENZENE	ND	50.0	52.2	104	52.0	104	104	80	120	0.4	20
TOLUENE	ND	50.0	46.9	94	47.5	95	94	80	120	1.3	20
TRICHLOROETHENE	9.90	50.0	62.4	105	61,9	104	105	80	120	0.8	20

Clayton Lab Number: Ext./Prep. Method: Date:

9507246-01A EPA 5030 07/28/95

Analyst:

Std. Source: Sample Matrix/Media:

WAS

V950726-01W WATER

Analytical Method: Instrument ID:

EPA8015_8020 05587 07/28/95

Date: Time: Analyst: Units:

19:58 WAS UG/L

Analyte		Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	7.15	7.41	104	7.42	104	104	81	118	0.1	20
ETHYLBENZENE	(PID)	ND	7.33	8.26	113	8.32	114	113	81	114	0.7	20
GASOLINE	(FID)	ND	500	541	108	543	109	108	80	150	0.4	25
TOLUENE	(PID)	ND	46.3	49.8	108	50.4	109	108	84	118	1.2	20
TOTAL XYLENE	(PID)	ND	43.3	45.8	106	46.6	108	107	85	115	1.7	20

Clayton Project No. 95072.57

Clayton Lab Number:

9507253-15A

Ext./Prep. Method; Date:

Analyst:

Std. Source: Sample Matrix/Media: 1 1

MALL 6881 WATER

Analytical Method:

Instrument ID: Date:

EPA335 2 07487 08/01/95 15:30

Time: Analyst: Units:

MOL mg/L

Analyte	Sample Result	Spike Level	Matríx Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
CYANIDE	NO	0.400	0.412	103	0.416	104	104	70	119	1.0	20



REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton Use Only Page_	of
Project No.	
Batch No. 9507257	7
nd, Code	W.P.
Date Logged In 1 28 43	By 20
Client Job No. /	0864 - 0

										-			-1-	-		<u></u>
O Nome										Date	Logg		_			3D
P Name	JOHN VARGAS TH				Purchase Order No. Client Job No. 60899.02											
	any CLAYTON	D	ept.		SEND	Nar										
Company CLA YTOM Dept. Mailing Address City, State, Zip Telephone No.			温草	P Con	npany	IN	GER	<u>-501</u>	<u> </u>	K	M	>		Dept.		
Telefax No.			ا <u>ت</u> ≷	Add	ress											
Date Result	s Req.: Rush Charges Authorized? Phone	/ Fax Results	Samples	2 oro:	 	T City	, State	, Zip		ANI	ALYSIS	DEC	LICOT	ro		
STANDAR	TAT Yes No 🗆		, -a	s are: applicable)	878	(Enter	an 'X'	in the	box bel	ow to	indicat	e regu	lest: E	cu nter a 'F	e if Pro	eservative added. •
Special Inst	ructions: (method, limit of detection, etc.)			ing Water	Containers			7	[N.	7	7	7	7	1	7	7//
• Explanatio	on of Preservative: $P = HCL$			cted in the of New York	ser of Co	,	60/	84 (J		1	/				/,	
(CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)		/4		1 /1		N/				//	Ι,	FOR LAB USE ONLY
	VW-8	7-27-8	H20	40mLS	2	Xp										DI A, 13
	YW-8			40mLs			XP								\neg	V-C.0
	VW-9			40 mLs	2	XP										02 A,B
	V W -9			HOMLS	2		XP									V C,D
	DS-5			40 mls	2	KP									一	03 A,B
	DS-5			40 mLS	2		XP									C.D
	Ds-5			250 MLS	1			V								V 6
TRIP F	3LANK # 0061495	V	Y	HOMLS	1				XP							OYA
															一	
Oliani		LYA-		(print)	Colle	ector's	Signatu	ne:	Rica	lan	1	1	h	,		
CHAIN OF	Relinquished by: Richard	lua .	Date/Time	5/6:200m	Rece	ived by	<i>r</i> :				7			D	ate/Tir	ne
CUSTODY	Relinquished by:		Date/Time	7 1	Rece	ived at	Lab b	y: 10	nya	Blac	il.	- · · · · · · · · · · · · · · · · · · ·			Date/17	28/45 8:00a
	Method of Shipment:				Sam	ple Con	idition I	Upon I	Receipt:	: 6	Acc	eptab	le		Othe	er (explain)
Authorized	by:	n:	ate		SAm	ples '	store	a pr	hindo	0041	night	•				
	(Client Signature Must Accompany Request)															
Please retu	lease return completed form and samples to one of the Clayton Environmental Consultants, In					listed b	elow:									

22345 Roethel Drive Raritan Center Novi, MI 48375 (810) 344-1770

160 Fieldcrest Ave. Edison, NJ 08837 (908) 225-6040

400 Chastain Center Blvd., N.W.

Suite 490 Kennesaw, GA 30144 (404) 499-7500

1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

DISTRIBUTION:

WHITE - Clayton Laboratory YELLOW - Clayton Accounting - Client Retains PINK

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



August 25, 1995

Mr. John Vargas CLAYTON ENVIRONMENTAL CONSULTANTS, INC. 1252 Quarry Lane Pleasanton, CA 94566

> ADDITIONAL REPORT Client Ref.: 60899.02 Clayton Project No.: 95064.43

Dear Mr. Vargas:

Attached is our additional analytical laboratory report for the samples received on June 30, 1995 and originally reported on July 17, 1995. As requested, all samples have been analyzed for BTEX and Gasoline.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Director, Laboratory Services

San Francisco Regional Office

HAH/tjb

Attachments

Page 2 of 34

Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

ample Identification: MW-3 Lab Number: 95064

Sample Matrix/Media:

reparation Method: Method Reference:

9506443-01C

WATER EPA 5030A

EPA 8260A

Date Sampled: 06/30/95 Date Received:

06/30/95 07/11/95 Date Prepared: Date Analyzed: 07/11/95

Analyst: JΡ

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3	ND N	055555505555555555555555555555555555555
Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5	58 9 17 ND ND ND ND ND	55555555555

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: MW-3

Date Sampled:

06/30/95 06/30/95

Lab Number:

9506443-01C WATER

Date Received: Date Prepared:

07/11/95

Sample Matrix/Media: reparation Method:

EPA 5030A

Date Analyzed:

07/11/95

Method Reference:

EPA 8260A

Analyst:

JP

				Method
				Detection
			Concentration	Limit
Analyte	 CAS	#	(ug/L)	(ug/L)

Volatile	Organic	Compounds	(Continued)
----------	---------	-----------	-------------

Page 4 of 34

06/30/95

06/30/95

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: MW-3

Lab Number:

Sample Matrix/Media:

Preparation Method:

Method Reference:

9506443-01C

WATER EPA 5030A

EPA 8260A

Date Sampled:

Date Received: Date Prepared:

07/11/95 Date Analyzed:

Analyst:

07/11/95

JP

			Method
			Detection
•		Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)

Volatile Organic Compounds (Continued)

1,2,4-Trimethylbenzene	95-63 - 6	54	5
1,3,5-Trimethylbenzene	108-67-8	40	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	26	5
p,m-Xylenes		41	5

Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	103	86 - 115
Dibromofluoromethane	1868-53-7	108	86 - 118
1,2-Dichloroethane-d4	17060-07-0	112	76 - 114
Toluene-d8	2037-26-5	99	88 - 110

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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: MW-4

Lab Number:

9506443-02C

Sample Matrix/Media:

Preparation Method: EPA 5030A Method Reference: EPA 8260A Method Reference:

WATER

Date Sampled: Date Received:

06/30/95 06/30/95

Date Prepared: Date Analyzed:

07/11/95 07/11/95

Analyst:

JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotoluene Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromoethane Dibromomethane Dibromomethane Dibromomethane	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3	ND 600 ND	0 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5	ND ND ND ND ND ND ND 11 ND ND ND ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

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Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: MW-4

9506443-02C

Lab Number:

WATER

Sample Matrix/Media: Preparation Method:

EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received:

06/30/95 06/30/95

Date Prepared:

07/11/95

Date Analyzed:

07/11/95

Analyst:

JΡ

			Method Detection
Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)

Analyte	CAS #	(ug/L)	(ng/r)
Volatile Organic Compounds (Con	tinued)		
			_
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5 5 5 5 5 5 5 5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	570	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	60	. 5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	98	5
n-Propylbenzene	103-65-1	110	5
sec-Butylbenzene	135-98-8	10	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
- Toluene	108-88-3	19	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	8	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5
1,2,3 thichtoropropane	30 10 4		-



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: MW-4 Date Sampled: 06/30/95 Lab Number: 9506443-02C Date Received: 06/30/95 Sample Matrix/Media: WATER Date Prepared: 07/11/95 reparation Method: EPA 5030A Date Analyzed: 07/11/95 Method Reference: EPA 8260A Analyst: JР

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (C	Continued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes surrogates	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	690 130 ND ND 74 520 Recovery (%)	5 5 10 5 5 5 5
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	105 94 100 110	86 - 115 86 - 118 76 - 114 88 - 110



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: VW-5

Lab Number: 9506443-03C

Sample Matrix/Media: Preparation Method: WATER

EPA 5030A

Date Sampled: Date Received: 06/30/95 06/30/95 .

Date Prepared:

07/11/95

Method

Date Analyzed:

07/11/95

Method Reference:	EPA 8260A	Analyst:	JP
-------------------	-----------	----------	----

Analyte	CAS #	Concentration (ug/L)	Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5	ND	20 5 5 5 5 5 20 5 5 5
Chlorobenzene Chloroethane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane	108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4	ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5	ND N	55555555555



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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: VW-5

Lab Number:

9506443-03C

Sample Matrix/Media: Preparation Method:

EPA 5030A

Method Reference:

WATER

EPA 8260A

Date Sampled: Date Received:

Date Prepared: Date Analyzed:

06/30/95 07/11/95 07/11/95

06/30/95

Analyst:

JP

		Detection
nalyte CAS #	Concentration (ug/L)	Limit (ug/L)

Volatile Organic Compounds (Co	ntinued)		
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
<pre>2,2-Dichloropropane</pre>	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1 3-dichloropropene	10061-02-6	ND	5

012			-
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87 - 68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
p-Isopropyltoluene	99-87-6	ND	5
. Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1.1.1.2-Tetrachloroethane	630-20-6	ND	د
1 1 2 2-Totrachloroethans	79-34-5	ND	5

tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61 - 6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1 1 2-Trichloroethane	79-00-5	ND	5

1,1,2-Trichloroethane 79-00-5 ND 5 79-01-6 ND Trichloroethene 75-69-4 Trichlorofluoromethane ND 1,2,3-Trichloropropane 96-18-4 ND



Date Sampled:

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06/30/95

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Lab Number: 9506443-03C Date Received: 06/30/95 Sample Matrix/Media: WATER Date Prepared: 07/11/95 Preparation Method: EPA 5030A Date Analyzed: 07/11/95 Method Reference: EPA 8260A Analyst: JP Method Detection Concentration Limit Analyte CAS # (ug/L) (ug/L) Volatile Organic Compounds (Continued) 1,2,4-Trimethylbenzene 95-63-6 ND 5 1,3,5-Trimethylbenzene 5 108-67-8 ND Vinyl acetate 108-05-4 ND 10 Vinyl chloride 75-01-4 ND 5 o-Xylene 5 95-47-6 ND p,m-Xylenes ND 5 urrogates Recovery (%) OC Limits (%) 4-Bromofluorobenzene 460-00-4 104 86 - 115 Dibromofluoromethane 1868-53-7 112 86 - 118 1,2-Dichloroethane-d4 17060-07-0 76 - 114 114 Toluene-d8 2037-26-5 101 88 - 110

D: Not detected at or above limit of detection-: Information not available or not applicable

Sample Identification: VW-5

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Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 60899.02
Clayton Project No. 95064.43

Sample Identification: VW-6 Date Sampled: 06/30/95 Date Received: Lab Number: 9506443-05C 06/30/95 07/11/95 Date Prepared: WATER Sample Matrix/Media: Preparation Method: EPA 5030A Date Analyzed: 07/11/95 Method Reference: EPA 8260A Analyst: JΡ

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane	67-64-1 71-43-2 108-86-1 74-97-5	ND ND ND ND	20 5 5 5
Bromodichloromethane Bromoform Bromomethane 2-Butanone	75-27-4 75-25-2 74-83-9 78-93-3	ND ND ND ND	5 5 5 20
n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene	104-51-8 75-15-0 56-23-5 108-90-7	ND ND ND ND	5 5 5 5
Chloroethane Chloroform Chloromethane	75-00-3 67-66-3 74-87-3	ND ND ND	5 5 5 5 5
2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane	95-49-8 106-43-4 124-48-1 96-12-8	ND ND ND ND	5 5 5
1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene	106-93-4 74-95-3 95-50-1 541-73-1	ND ND ND ND	5 5 5 5
1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane	106-46-7 75-71-8 75-34-3 107-06-2	ND ND ND	5 5 5 5
1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	75-35-4 156-59-2 156-60-5	ND ND	5 5 5

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

sample Identification: VW-6

Lab Number:

9506443-05C

Sample Matrix/Media: Preparation Method:

Method Reference:

WATER EPA 5030A

EPA 8260A

Date Sampled:

06/30/95 Date Received: 06/30/95

Date Prepared: Date Analyzed:

07/11/95 07/11/95

Analyst:

JP

			Method Detection
Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)

Analyte	CAS #	(ug/L)	(ug/L)
Volatile Organic Compounds (Cor	ntinued)		
Volatile Organic Compounds (Cor 1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3	ND N	5555555505505 25525
n-Propylbenzene sec-Butylbenzene Styrene tert-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichloroethane 1,1,2-Trichloroethane Trichloroethane Trichloroethane Trichlorofluoromethane 1,2,3-Trichloropropane	103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5 79-01-6 75-69-4 96-18-4	ND N	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5



Date Sampled:

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06/30/95

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: VW-6 Date Received: 06/30/95 9506443-05C Lab Number: Date Prepared: WATER 07/11/95 Sample Matrix/Media: Date Analyzed: 07/11/95 EPA 5030A Preparation Method: Analyst: JP EPA 8260A Method Reference: Method Detection Concentration Limit CAS # (ug/L) (ug/L) Analyte Volatile Organic Compounds (Continued) 5 95-63-6 ND 1,2,4-Trimethylbenzene 5 108-67-8 ND 1,3,5-Trimethylbenzene 1.0 108-05-4 ND Vinyl acetate 5 75-01-4 ND Vinyl chlaride 5 95-47-6 ND o-Xylene 5 ND p,m-Xylenes Recovery (%) QC Limits (%) Surrogates 86 - 115 460-00-4 108 4-Bromofluorobenzene 86 - 118 108 Dibromofluoromethane 1868-53-7 76 - 114 17060-07-0 114 1,2-Dichloroethane-d4 88 - 110 2037-26-5 101 Toluene-d8



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Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: OB-1

Lab Number: 9506443-06C

Sample Matrix/Media:

Preparation Method: EPA 5030A

Method Reference:

WATER

EPA 8260A

Date Sampled: Date Received:

06/30/95 06/30/95 . 07/11/95

Date Prepared: Date Analyzed:

07/11/95

Ana.	Lyst	:	JP
------	------	---	----

			Method Detection
Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)

Analyte	CAS #	Concentration (ug/L)	(ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	160	5 5 5 5 5 5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95 - 49 <i>-</i> 8	ND	5
4-Chlorotoluene	106-43-4	ND	· 5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541 - 73-1	ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
1,4-Dichlorobenzene	106-46-7	ND	5
. Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5 5 5 5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	12	5
trans-1,2-Dichloroethene	156-60-5	15	5



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: OB-1

Lab Number: 9506443-06C

Sample Matrix/Media: Preparation Method:

EPA 5030A

Method Reference:

WATER

EPA 8260A

Date Sampled: 06/30/95 Date Received: 06/30/95 Date Prepared: 07/11/95 Date Analyzed: 07/11/95

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Conti	nued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene styrene tert-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane Trichlorofluoromethane 1,2,3-Trichloropropane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-01-6 75-69-4 96-18-4	ND N	55555555555055555555555555555555555555

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: OB-1

Lab Number:

9506443-06C

Sample Matrix/Media:

WATER

Preparation Method: Method Reference:

EPA 5030A

FPA 8260A

Date Sampled:

Date Received: 06/30/95 Date Prepared:

Date Analyzed:

07/11/95 07/11/95

06/30/95

wethod Reference: EPA 82	260A	Analyst:	JP
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Co	ontinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	8 ND ND ND ND 15	5 5 10 5 5 5
<u>Surrogates</u> .		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	108 99 103 109	86 - 115 86 - 118 76 - 114 88 - 110

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: FIELD BLANKS #0061495

9506443-10C

Lab Number:

WATER

Sample Matrix/Media: Preparation Method:

EPA 5030A

Method Reference:

EPA 8260A

Date Sampled:

06/30/95 Date Received: 06/30/95 Date Prepared: 07/12/95

Date Analyzed:

07/12/95

Analyst: JΡ

Volatile Organic Compounds	Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Benzene 71-43-2	Volatile Organic Compounds			
1.3-Dichlorobenzene 541-73-1 ND 5 1.4-Dichlorobenzene 106-46-7 ND 5 Dichlorodifluoromethane 75-71-8 ND 5 1.1-Dichloroethane 75-34-3 ND 5 1.2-Dichloroethane 107-06-2 ND 5 1.1-Dichloroethene 75-35-4 ND 5 cis-1,2-Dichloroethene 156-59-2 ND 5 trans-1,2-Dichloroethene 156-60-5 ND 5	Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotenane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene	71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2	ND N	ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: FIELD BLANKS #0061495 Lab Number:

9506443-10C

Sample Matrix/Media: Preparation Method:

WATER

Method Reference:

EPA 5030A EPA 8260A

Date Sampled: Date Received:

06/30/95 06/30/95

Date Prepared: Date Analyzed:

07/12/95 07/12/95

Analyst:

JP

			Method	
		A	Detection	
Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)	
		(-5, -,	(49/11/	B

Analyte	CAS #	Concentration (ug/L)	Limit (ug/L) .
Volatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane	78-87-5 142-28-9 594-20-7	ND ND	5 5
1,1-Dichloropropene cis-1,3-dichloropropene	563-58-6 10061-01-5	ND ND ND	5 5 5 5 5 5
trans-1,3-dichloropropene Ethylbenzene Freon 113	10061-02-6 100-41-4 76-13-1	ND ND ND	5 5 5
Hexachlorobutadiene 2-Hexanone Isopropylbenzene	87-68-3 591-78-6 98-82-8	ND ND ND	5 20 . 5
p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone	99-87-6 75-09-2 108-10-1	ND ND ND	. 5 5 20
Naphthalene n-Propylbenzene sec-Butylbenzene	91-20-3 103-65-1 135-98-8	ND ND	5 5
Styrene tert-Butylbenzene 1,1,1,2-Tetrachloroethane	100-42-5 98-06-6 630-20-6	ND ND ND	5 5 5
1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene	79-34-5 127-18-4	ND ND	5 5 5
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene	108-88-3 87-61-6 120-82-1	ND ND ND	5 5 5
1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene	71-55-6 79-00-5 79-01-6	ND ND	5 5 5 5 5 5 5
Trichlorofluoromethane 1,2,3-Trichloropropane	75-69-4 96-18-4	ND ND ND	5 5 5



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Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: FIELD BLANKS #0061495

Date Sampled: 06/30/95

Lab Number: Sample Matrix/Media: 9506443-10C WATER

Date Received: 06/30/95 Date Prepared: 07/12/95

Preparation Method:

EPA 5030A EPA 8260A

Date Analyzed: 07/12/95

Method Reference:

Analyst: QΤ.

mental mercreated.	2004	Anaryst:	J.P
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (C	Continued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	104 102 107 100	86 - 115 86 - 118 76 - 114 88 - 110

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: TRIP BLANKS #0061495

Date Sampled: 06/30/95

Lab Number: Sample Matrix/Media:

9506443-11C WATER

Date Received: 06/30/95 Date Prepared: 07/11/95

Preparation Method: Method Reference:

EPA 5030A

Date Analyzed:

07/11/95

EPA 8260A Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone .	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	· 5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	· 5 ·
2-Chlorotoluene	95-49-8	ND	, 5
4-Chlorotoluene	106-43-4	ND	. 5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	ح ت
1.2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5 5 5 5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1.1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: TRIP BLANKS #0061495

06/30/95 Date Received:

Lab Number:

9506443-11C

06/30/95

Sample Matrix/Media: Preparation Method:

WATER

Date Prepared: 07/11/95 Date Analyzed: 07/11/95

EPA 5030A

Date Sampled:

JP

Method Reference: EPA 8260A Analyst:

			Method
			Detection
-		Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)

Analyte	CAS #	(ug/L)	(ug/L)
Volatile Organic Compounds (Cor	ntinued)		
1 2 7/26/1-00-00-00-0	70 07 5	17D	_
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND ·	5 5 5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND .	5
p-Isopropyltoluene	99-87-6	ND	5 5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	. 5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
_ Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
11.2,3-Trichloropropane	96-18-4	ND	5 5

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. Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

CAS #

Sample Identification: TRIP BLANKS #0061495

Lab Number:

Analyte

Sample Matrix/Media:

Preparation Method:

WATER

9506443-11C

EPA 5030A

Date Sampled:

06/30/95 Date Received: 06/30/95 Date Prepared: 07/11/95

Date Analyzed:

07/11/95 JP

Method Reference: EPA 8260A Analyst:

> Method Detection Concentration Limit (ug/L) (ug/L)

<u>Volatile</u>	Organic	Compounds	(Continued)
-----------------	---------	-----------	-------------

1,2,4-Trimethylbenzene	95-63-6	ND	
1,3,5-Trimethylbenzene	108-67-8	ND ND	5
Vinyl acetate	108-05-4	···-	5
Vinyl chloride	75-01-4	ND	10
o-Xylene	95-47-6	ND	5
p,m-Xylenes	93-4/-6	ND	5
b'w_virenes		ND	5

urrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	101	86 - 115
Dibromofluoromethane	1868-53-7	103	86 - 118
1,2-Dichloroethane-d4	17060-07-0	106	76 - 114
Toluene-d8	2037-26-5	104	88 - 110

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9506443-12A

Date Received:

Sample Matrix/Media: Preparation Method:

WATER EPA 5030A Date Prepared: 07/11/95 Date Analyzed: 07/11/95

Method Reference:

EPA 8260A

Analyst:

JP

Acetone 67-64-1 ND 20 Benzene 71-43-2 ND 5 Bromobenzene 108-86-1 ND 5 Bromochloromethane 74-97-5 ND 5 Bromodichloromethane 75-27-4 ND 5 Bromodichloromethane 75-25-2 ND 5 Bromomethane 74-83-9 ND 5 2-Butanone 78-93-3 ND 20 n-Butylbenzene 104-51-8 ND 5 Carbon disulfide 75-15-0 ND 5 Carbon tetrachloride 56-23-5 ND 5 Chloroethane 75-00-3 ND 5 Chloroethane 75-00-3 ND 5 Chlorotoluene 95-49-8 ND 5 2-Chlorotoluene 95-49-8 ND 5 1.2-Dibromochloromethane 106-43-4 ND 5 1.2-Dibromochane 106-93-4 ND 5 1.2-Dibromochane 106-93-4 ND 5 1.2-Dibromochane 106-93-4 ND 5 1.2-Dibromomethane 74-95-3 ND 5 1.2-Dichlorobenzene 106-46-7 ND 5 1.3-Dichlorobenzene 106-46-7 ND 5 1.4-Dichlorobenzene 106-46-7 ND 5 1.2-Dichlorobenzene 107-06-2 ND 5 1.1-Dichloroethane 107-06-2 ND 5 1.1-Dichloroethene 75-35-4 ND 5 1.1-Dichloroethene 156-60-5 ND 5 156-60-5 ND 5	Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Benzene 71-43-2 ND 5 Bromobenzene 108-86-1 ND 5 Bromochloromethane 74-97-5 ND 5 Bromodichloromethane 75-27-4 ND 5 Bromoform 75-25-2 ND 5 Bromomethane 74-83-9 ND 5 2-Butanone 78-93-3 ND 20 n-Butylbenzene 104-51-8 ND 5 Carbon disulfide 75-15-0 ND 5 Chlorobenzene 108-90-7 ND 5 Chlorobenzene 108-90-7 ND 5 Chlorothane 75-00-3 ND 5 Chlorothane 74-87-3 ND 5 Chlorototluene 95-49-8 ND 5 2-Chlorototluene 95-49-8 ND 5 1.2-Dibromochloromethane 106-93-4 ND 5 1.2-Dibromochlane 96-12-8 ND 5 1.2-Dibromoethane 95-50-1 ND 5 Dibromomethane 95-50-1 ND 5 1.3-Dichlorobenzene 106-46-7 ND 5 Dichlorodifluoromethane 75-71-8 ND 5 1.4-Dichlorobenzene 106-46-7 ND 5 Dichlorodifluoromethane 75-71-8 ND 5 1.4-Dichlorobenzene 106-46-7 ND 5 Dichlorodifluoromethane 75-71-8 ND 5 1.1-Dichloroethane 75-34-3 ND 5 1.2-Dichloroethane 75-34-3 ND 5 1.1-Dichloroethane 107-06-2 ND 5 1.1-Dichloroethane 106-06-06-06-06-06-06-06-06-06-06-06-06-0	Volatile Organic Compounds			
	Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotehane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene	71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4	ND N	555555555555555555555555555555555555555



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Analytical Results for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: METHOD BLANK

METHOD BLANK 9506443-12A Date Sampled: Date Received:

Lab Number:

WATER

Date Prepared: 07/11/95

Sample Matrix/Media: Preparation Method:

EPA 5030A

Date Analyzed: 07/11/95

Method Reference:

EPA 8260A

Analyst: JP

Method

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con	tinued)		
Volatile Organic Compounds (Com 1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5	ND N	55555555555555555555555555555555555555
Trichloroethene Trichlorofluoromethane 1,2,3-Trichloropropane	79-01-6 75-69-4 96-18-4	ND ND	5 5 5

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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: METHOD BLANK

1,3,5-Trimethylbenzene

Vinyl acetate

Vinyl chloride

Lab Number:

9506443-12A

Sample Matrix/Media:

WATER

reparation Method: Method Reference:

EPA 5030A

EPA 8260A

Date Sampled:

Date Received: --

Date Prepared: Date Analyzed:

07/11/95 07/11/95

5

10 5

Analyst:

ND

ND

ND

JР

\nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)	•		
1,2,4-Trimethylbenzene	95-63-6	ND	5

108-67-8

108-05-4

75-01-4

o-Xylene	95-47-6	ND	5
p,m-Xylenes		ND	5
<u>surrogates</u>		Recovery (%)	OC Limits (名)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4	108	86 - 115
	1868-53-7	114	86 - 118
	17060-07-0	114	76 - 114
	2037-26-5	101	88 - 110

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: MW-3

Lab Number:

Bample Matrix/Media:

Preparation Method:

Method Reference:

9506443-01A

WATER

EPA 5030

EPA 8015/8020

Date Sampled:

06/30/95 Date Received: 06/30/95 07/06/95

Date Prepared: Date Analyzed:

07/06/95

Analyst:

NAN

Method Detection Concentration Limit nalyte CAS # (ug/L) (ug/L) TEX/Gasoline Benzene 71-43-2 16 0.4 Ethylbenzene 100-41-4 20 0.3 Toluene 108-88-3 1.7 0.3 o-Xylene 95-47-6 33 0.4 p,m-Xylenes 99 0.4 Gasoline 1600 50 Surrogates Recovery (%) OC Limits (%) a, a, a-Trifluorotoluene 98-08-8 103 50 - 150



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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: MW-4

Lab Number:

Sample Matrix/Media:

Preparation Method: Method Reference:

9506443-02A

WATER

EPA 5030 EPA 8015/8020

Date Sampled:

06/30/95 Date Received: 06/30/95 Date Prepared:

Date Analyzed:

07/07/95 07/07/95

Analyst:

NAN

	WIGTAR!	NAN
CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
71-43-2 100-41-4 108-88-3 95-47-6	390 380 18 53 400 7800	0.4 0.3 0.3 0.4 0.4
	Recovery (%)	
98-08-8	106	OC Limits (%) 50 - 150
	71-43-2 100-41-4 108-88-3 95-47-6 	Concentration (ug/L) 71-43-2 390 100-41-4 380 108-88-3 18 95-47-6 53 400 7800 Recovery (%)

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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

ample Identification: VW-5

Lab Number:

9506443-03A

Sample Matrix/Media:

WATER

reparation Method: ethod Reference:

EPA 5030

EPA 8015/8020

Date Sampled:

06/30/95 Date Received: 06/30/95

Date Prepared: Date Analyzed:

07/06/95 07/06/95

Analyst:

NAN

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
STEX/Gasoline			
Benzene .	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	- -	ND	0.4
Gasoline		ND	50
urrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	87	50 - 150

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: VW-6

Lab Number:

9506443-05A

Sample Matrix/Media: Preparation Method:

WATER

Method Reference:

EPA 5030

EPA 8015/8020

Date Sampled: Date Received:

06/30/95 06/30/95

Date Prepared: Date Analyzed:

07/06/95

Analyst:

07/06/95

NAN

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p.m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4
Surroqates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	80	50 - 150

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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

Sample Identification: OB-1

Lab Number:

9506443-06A

Sample Matrix/Media: Preparation Method:

WATER

Method Reference:

EPA 5030

EPA 8015/8020

Date Sampled: 06/30/95 Date Received:

06/30/95 Date Prepared: 07/06/95 Date Analyzed: 07/06/95

Analyst:

NAN

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Benzene Ethylbenzene Toluene o-Xylene p.m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6 	140 15 7.0 3.1 13 2600	0.4 0.3 0.3 0.4 0.4

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Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: FIELD BLANKS #0061495

06/30/95

ab Number: ample Matrix/Media:

9506443-10A WATER

Date Sampled: Date Received: 06/30/95 07/06/95 Date Prepared:

Preparation Method:

EPA 5030

Date Analyzed:

NAN Analyst:

07/06/95

PDA 8015/8020

Cas # Concentration Lin	ethod Reference:	EPA 8015/8020		Analyst:	MAM
Benzene 71-43-2 ND 0 Ethylbenzene 100-41-4 ND 0 Toluene 108-88-3 ND 0 o-Xylene 95-47-6 ND 0 p,m-Xylenes ND 0 Gasoline ND 50 Surrogates Recovery (%) QC Limits	nalyte		CAS #		Method Detection Limit (ug/L)
Ethylbenzene 100-41-4 ND (Toluene 108-88-3 ND (O-Xylene 95-47-6 ND (O-Xylenes	TEX/Gasoline			,	
<u>Juli i oquites</u>	Ethylbenzene Toluene o-Xylene p,m-Xylenes		100-41-4 108-88-3	ND ND ND ND	0.4 0.3 0.3 0.4 0.4
a a a-Trifluorotoluene 98-08-8 87 50 - 3	urrogates			Recovery (%)	OC Limits (%)
	a,a,a-Trifluorotolu	lene	98-08-8	87	50 - 150

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Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: TRIP BLANKS #0061495

06/30/95

Lab Number: Sample Matrix/Media: 9506443-11A

06/30/95

Preparation Method:

WATER EPA 5030 Date Prepared: Date Analyzed:

Date Sampled:

Date Received:

07/06/95 07/06/95

Method Reference:

EPA 8015/8020

Analyst:

NAN

			Method Detection
nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)

BTEX	/Gaso	<u>line</u>
------	-------	-------------

Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes		ND	0.4
Gasoline		ND	50

<u>sur</u>	<u>ro</u>	<u>qa</u>	<u>ces</u>

Recovery (%)

QC Limits (%)

a,a,a-Trifluorotoluene

98-08-8

90

50 - 150



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Analytical Results for

Clayton Environmental Consultants, Inc. Client Reference: 60899.02

Clayton Project No. 95064.43

Sample Identification: METHOD BLANK

Lab Number:

9506443-12A

Sample Matrix/Media: Preparation Method: EPA 5030 Method Reference: EPA 8015

WATER

EPA 8015/8020

Date Sampled: Date Received:

Date Prepared:

07/06/95 Date Analyzed: 07/06/95

Analyst: NAN

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4
<u>urrogates</u>		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	90	50 - 150



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Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 60899.02 Clayton Project No. 95064.43

ample Identification: See Below

Date Received: 06/30/95 Date Analyzed: 07/03/95

Lab Number:

9506443

Sample Matrix/Media: lethod Reference:

WATER

EPA 353.2

Lab Number	Sample Identification	Date Sampled	Nitrate-N, Dissolved (mg/L)	Method Detection Limit (mg/L)
01	MW - 3	06/30/95	<0.05	0.05
02	MW-4	06/30/95	<0.05	0.05
03	VW-5	06/30/95	<0.05	0.05
04	MW - 1	06/30/95	0.25	0.05
05	VW-6	06/30/95	0.09	0.05
06	OB-1	06/30/95	<0.05	0.05
07	MW - 2	06/30/95	0.63	0.05
08	VW-8	06/30/95	<0.05	0.05
09	VW-9	06/30/95	<0.05	0.05
12	METHOD BLANK		<0.05	0.05



ATTACHMENT 2

FIELD SAMPLING SURVEY FORMS

Job # <u>ἐνΟ</u>	E99.03 Site: IA MW7 Sampling Tea	am; <u>A</u>	-RAUD R. EIL-VA	Date:	Jecz	27,1995
	ethod:					
Teta oona	itions:					
Describe Ed	quipment D-Con Befor	re Sampling	This Well:			,
Total Depth of Well: _	feet	Time: _	1352	Depth to Wate Before Pumpir	ır ıg:	15.79 feet
Volume		Diam	eter		Purge	
Height of Water Column:	feet *	<u>2-inch</u> .16		ume		
	ng From:fee					
Notes on In	itial Discharge: _					·
Time	Volume Purged	pH	Conductivity	<u></u>		Notes
				<u></u>	<u></u>	
						

Well # <u>/2</u>	16-4 Sampling Tea	am:	R. SILVA	Date:	July 27, 1995
	ethod:				
Describe Eq	puipment D-Con Befor	re Samplin	g This Well: _		
Total Depth of Well: _	feet	Time:	1348	Depth to Water Before Pumping	: <u>17.93</u> feet
Volume		Diar	neter	Pi	ırge
Height of Water	feet *	<u>2-inch</u> .16		meF: gal *	actor To Purge
	ng From:fee				
Notes on Ini	itial Discharge:	-			
Time	Volume Purged	На	Conductivity	<u>T</u>	Notes

· · · · · · · · · · · · · · · · · · ·		··-			

Job # <u>LC849.03</u> Site: <u>I</u> Well # <u>VW-5</u> Sampling Tea Sampling Method: Field Conditions:	am: R. Savi	4	
Describe Equipment D-Con Before	e Sampling This Well	•	·
Total Depth of Well:feet	Time: <u>1342</u>	Depth to Wate Before Pumpin	g: <u>22.82</u> feet
Volume Height of Water Column: feet *	.16 .65 =		Factor To Purge
Depth Purging From:feet Notes on Initial Discharge:			
		vity T	Notes

Well # $\underline{Y} \underline{\mathcal{W}}$ Sampling Meth	Site: IN -6 Sampling Tea od:ons:	in: <u>R. 5</u>	ILVA	<u>, , , , , , , , , , , , , , , , , , , </u>	,
Describe Equi	oment D-Con Befor	e Sampling Thi	.s Well:		
Total Depth of Well:	feet	Time: <u>/34</u>	De Be	pth to Water fore Pumping:	20.98 feet
Depth Purging	feet * From: feet :	.16 .1	nch Volume 65 =	gal *	tor <u>To Purge</u>
	al Discharge:	pH Cor	nductivity		Notes

Project #: 66899.02 Site: THGERSOU-RAND Date: JULY 27, 1895 Well #: YW-8 Sampling Team: R. SILVA Sampling Method: DISPOSABLE BAILER
Field Conditions: CLFAR SKIES, WAKE, COLHDY
Describe Equipment D-Con Before Sampling This Well:
Total Depth of Well: 25,20 feet Time: 1708 Depth to Water Before Pumping: 22,77 feet
Height of Diameter Water Column: 243 feet Diameter 2-inch 4-inch Volume Factor To Purge L58 gal * 4 = 6.32 gal
Depth Purging From: 25 feet Time Purging Begins: 1215
Notes on Initial Discharge: <u>CRAYISH</u> SILTY
Time Volume Purged pH Conductivity T Notes 1215 2-6au 6.6 .764 19.6 CLEAR 1217 4-6au 6.6 802 19.8 CLEAR, PURGED 1218 6-6au 6.9 860 19.6 CLEAR 1219 7-6au 6.6 877 19.7 CLEAR, PURGED



ATTACHMENT 3

DRILLING, WELL CONSTRUCTION, AND SAMPLING PROTOCOLS FOR BOREHOLE/MONITORING WELL INSTALLATION



DRILLING, WELL CONSTRUCTION, AND SAMPLING PROTOCOLS FOR BOREHOLE/MONITORING WELL INSTALLATION

BOREHOLE INSTALLATION

Clayton Environmental Consultants, Inc. acquires the proper governmental agency permits to bore, drill, or destroy all proposed boreholes and monitoring wells that intersect with groundwater aquifers and writes a health and safety plan.

Clayton subcontracts only with drillers who possess a current C-57 water well contractor's license issued by the State of California and whose personnel have attended the OSHA 40-hour Hazardous Materials Safety Training. Prior to starting work, a "tailgate" safety meeting including discussion of the safety hazards and precautions relevant to the particular job will be held with all personnel working on the job. Well drillers are identified on permit applications.

Borings are drilled dry by hollow- or solid-stem, continuous flight augers. Augers, drill rods, and other working components of the drilling rig are steam-cleaned before arriving onsite to prevent the introduction of contaminants. These components are also steam-cleaned between borings away from boring locations. Cleaned augers, rods, and other components are stored, and/or covered when not in use.

Our bore logs include a detailed description of subsurface stratigraphy. Clayton examines the soil brought to the surface by drilling operations, and samples undisturbed soil every 5 feet or as otherwise specified. Soil cuttings are screened for hydrocarbon contamination using a photoionization detector. Boring logs are filled out in the field by a professional geologist, civil engineer, engineering geologist who is registered by the State of California, or a technician who is trained and working under the supervision of one of the previously mentioned persons, using the Unified Soil Classification System.

SOIL SAMPLING

Soil samples are taken every 5 feet, at areas of obvious contamination, or as otherwise specified, with a California modified split-spoon sampler that is lined with three six-inch brass tubes. The sampler and rod are inserted into the borehole to the current depth and a hammer of known weight and height above the sampler are allowed to free-fall onto the rod, advancing the assembly 18 inches into undisturbed soil. Clayton uses the number of blows necessary to drive the sampler into the ground to help evaluate the consistency of materials encountered. The sampler is then pulled from the borehole and disassembled, and the three brass tubes are separated for inspection and labeling.

Clayton uses new brass liners or liners cleaned with a trisodium phosphate (TSP) solution, double rinsed with clean tap water, and air dried prior to each sampling. The sampler is also cleaned with TSP and rinsed with tap water between sampling events.

Soil samples selected for laboratory analysis are left in the brass liners, sealed with aluminum foil and plastic caps, taped for air tightness, labeled, and immediately placed into a pre-cooled ice

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chest chilled to less than 4°C. Labels contain the following information: site name, date and time sampled, borehole number and depth, and the sampler's initials. The samples are transported under chain-of-custody to a state-certified laboratory. The laboratory analyzes soil samples within the prescribed holding time, storing them at temperatures below 4°C at all times.

Pending results of laboratory analysis, excess drilling and sampling cuttings are placed into Department of Transportation (DOT)-approved drums, labeled with the name of the site, address, and well number, and left at the site. Uncontaminated soil may be disposed of by the client. Soil found to contain levels of contaminants above local or state action levels will require that the client dispose of it in accordance with hazardous waste regulations. At the client's request, we will assist with the disposal of contaminated soil.

WELL CONSTRUCTION

Boreholes are converted to monitoring wells by placing 2-inch or 4-inch diameter well casing with flush-threaded joints and slotted screen into the borehole. Construction materials include polyvinyl chloride (PVC), stainless steel, or low carbon steel. The most suitable material for a particular installation will depend on the parameters to be monitored. All screens and casings used are in a contaminant-free condition when placed in the ground. No thread lubrication is used, other than teflon tape, for connecting the casing segments.

Wells extend at least 10 feet into the upper saturated zone, but do not extend through any clay layers greater than 5 feet that are below the shallow water table. The standard practice for wells installed at hydrocarbon contamination sites is to construct a well with a 20-foot long perforated interval extending 15 feet below and 5 feet above the water table in an unconfined aquifer. The top of the well is solid casing. The annular space of the borehole is backfilled with washed, kilndried sand to a point at least 1 foot above the slotted screen. A seal above the filter pack is formed by placing a 1- to 2-foot layer of bentonite pellets on top of the sand. The bentonite pellets are moistened by pouring clean tap water down the hole so that they can expand and seal the annulus. A neat cement grout is placed above the bentonite seal and brought to the ground surface.

Well casings are protected from surface contamination, accidental damage, and unauthorized entry or tampering with water-tight locking caps on the well casings. The caps are usually surrounded by a concrete vault. Wells are clearly identified with a metal tag or other device where the following information is recorded: well number, depth to water, depth of well, casing data including location of screened interval.

WELL DEVELOPMENT

The well seal in newly developed wells must set up for 48 to 72 hours prior to development. Since development of the well can volatilize contaminants present, the well must also settle for at least 48 to 72 hours between development and the first purging/sampling incident.

All monitoring wells are initially developed to clean the well and stabilize sand, gravel, and disturbed aquifer materials around the screened internal perforations. Wells are developed by pumping (or bailing) and surging until water turbidity and specific conductance stabilize. In some cases, where wells are installed in low permeability formations and the wells purge dry, the well

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is allowed to recover and is purged dry three times. Clean tap water is introduced into the well if it does not recover rapidly enough.

Pending results by laboratory analysis, purge water from well development and sampling is placed into DOT-approved drums, labeled with the name of the site, address, well number, and left at the site. Uncontaminated water may be disposed of by the client. Water found to contain levels of contaminants above local or state action levels requires that the client dispose of it in accordance with hazardous waste requirements. At the client's request, we can assist with the disposal of contaminated purge water.

GROUNDWATER SAMPLING

To collect a representative sample of the groundwater, stagnant water within the well casing and filter material must be purged and fresh aquifer water allowed to replace it. The water is purged from the well by pumping or bailing at least three well volumes. Well volumes are calculated by measuring depth to groundwater to the nearest 0.01 foot upon arrival at the well before any purging has begun. Groundwater samples are collected only after purging has been of sufficient duration for pH, temperature, and electrical conductivity to stabilize. When purging low-yield wells, the wells are purged to dryness. When the well recovers to 80% of the depth measured upon arrival, samples are collected.

Field sampling logs maintained for each well include:

- Monitoring well identification
- Static water level, before and after pumping
- Well depth
- Condition of water prior to purging (e.g., amount of free product)
- Purge rate and volume
- pH, temperature, and conductivity during purging
- Time purged
- Time of sample collection
- Sampling method
- Name of sampler
- Climatic conditions

Water samples are collected using clean teflon bailers. All equipment that contacts samples is thoroughly cleaned before arrival at the site and between sampling events.

Water is collected in clean laboratory-supplied containers, labeled, placed immediately into an ice chest pre-cooled to 4°C, and transported to Clayton's laboratory for analysis. One trip blank will be furnished in accordance with our quality assurance/quality control (QA/QC) program.

All samples are collected in such a manner so as to minimize the volatilization of a sample due to agitation and/or transfer from bailer to sample container. Samples are collected so that contaminants most sensitive to volatilization are sampled first.

Preservatives are not added to any sample, unless instructed. If requested, they are supplied by Clayton's laboratory.

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All sample containers are labeled in the field. Labels contain the following information: project name, sample identification number, project number, date and time of collection, and sampler's initials.

Under no circumstances are sealed sample containers opened by anyone other than the laboratory personnel who perform the requested analyses. If it is necessary for samples or sample chests to leave the immediate control of the sampler prior to delivery to the laboratory, for example during shipment by an overnight shipper, a custody seal is placed on each sample container and/or sample chest to ensure that the samples have not been tampered with during transportation. The custody seal is signed by the sampler, and the date and time that the seal was placed is recorded. The elapsed time between sample collection and delivery to the laboratory never exceeds 48 hours. Water samples are not held for more than 14 days prior to analysis and are kept at 4°C at all times.

To document and trace samples from time of collection, a signed chain-of-custody record is filled out by the sampler and accompanies the samples through the laboratory analyses. The completed chain-of-custody is included with the analytical report from the laboratory.

REFERENCES

Groundwater Monitoring Guidelines, Revised February 1990. Alameda County District Groundwater Protection Program.

Leaking Underground Fuel Tank (LUFT) Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Tank Closure, May 1988. State of California LUFT Task Force.

Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, Revised November 1989. North Coast, San Francisco Bay, and Central Valley regions of the California State Water Quality Control Board.

Standards for the Construction and Destruction of Wells and Other Deep Excavations in Santa Clara County, Revised June 1989. Santa Clara Valley Water District.

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CAPSULE VIRONMENTAL ENGINEERING INC.	PROJECT CALCUL	ATION SE	EET
Project Name: Project Number: Task Number: Re:	Sun Leandro 001-317 420 Grandinator Flow Veloci	By: Dai Pag cc:	e: 9/20/95
the Sun Lean		س د د ره	edy for
Uriny, V=	(K)'x(i)/n		
where			
. V==	groundwater velocite	<u></u>	
Ϋ́=	hydroula conduc	Conty	

L' hydraulic gradient N= porosity

K (hydroulin conductionly) externate - From Ingeroll Rend Corp Duter Summery Report DEC 1990, Table 3, preparably IT Corp. - an estimate of hydraules conductaty for MWH, from a pumptest, is

K=48-67 golday/fc

4895 x 15th = 6.4 ft/day

87 gay 10 1 152 - 9.0 felder



PROJECT CALCULATION SHEET

Project Name:	San Leardho
Project Number:	001-767
Task Number:	410 ,
Re.	Grandenater Vela

By:	JIM
Date:	9120195
Page:	2 of
cc:	

i (hydraula) gradient) estimate

from Jan 30, 1995 with Cool contour map = (13.03-11.39) fe = 1.64 fe = .005

n (yororay) estimate

1=30°C from USGS With Softly Paper 2220

V= (9-0 ft/dny) (.005) = .15 ft/dny = .15 ft/dny × 365dny 54.7 ft/yr.

Estimate of que Clow volocity is 0.15 It I day or 55 ft 14v

Checked by: LTM

Date: 23:25

Boring number: GP-2

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 28, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

Geologist\Observer: John McDermott. Capsule

	Depth (feet)	Lithologic Description	OVM Reading (ppm)	Notes
	0.0-2.0	fill material; consisting of clay, sand, and gravel	0.4	no odor
	2.0-4.0	clay; dark brown, silty sand	2.1	no odor
	4.0-6.0	clay; brown ,very sandy; by 5.5 sand; brown to yellow brown, fine to medium grained, silty	0.8	no odor
	6.0-8.0	sand; brown to yellowish-brown, very fine to medium grained, silty, some gravel pieces	5.2	no odor
	8.0-10.0	sand ? from 8 to 9+, then dark brown clay	2.5	no odor; poor recovery from 8 to 9+
•	10.0-12.0	sand; yellowish -brown, then dark brown to blackish brown, dense clay	3.5	no odor
	12.0-14.0	sand; brown to yellowish-brown, very fine to medium grained, very silty, some gravel pieces	0.8	no odor; poor recovery
	14.0-16.0	sand; brown, very fine to medium grained, very silty, "dirty" appearance, gravel pieces, by 15.5 more claylike appearance, clay is yellowish-brown, very sandy	1.2	no odor
	16.0-18.0	clay; yellowish-brown 16.0 to 16.5, then sand; from 16.5 to 17.0, dark brown to yellowish-brown, gravely, then sand; very fin to medium grained, silty, cleaner with depth		no odor
	18.0-20.0	sand; yellowish-brown to brown, silty, very fine to medium grained, some gravel near 19.0, by 19.5 more claylike appearance, more greyish color, entire sample is damp	1.3 e	no odor
	20.0-22.0	sand; greyish-brown to brown, very fine to fine grained, very clayey, greyer with depth, some reddish-brown mottling	1.9	no odor

22.0-24.0 sand; greyish-brown to dark brown, more clayey 3.0 through interval

no odor; after sampling, the hole was probed with steel tape for depth, gasoline odor on tape

TD

Boring number: GP-5

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 28, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

TD

Geologist\Observer: John McDermott. Capsule

Note: GP-5 location is in a concrete driveway in a very active part of the 4M Manufacturing facility. In order to minimize disruption to facility operations, the probe was pushed to 12.0 feet before continuous sampling was started.

Depth (feet)	Lithologic Description	OVM Reading (ppm)	<u>Notes</u>
12.0-14.0	sand; brown to yellowish-brown, very fine to medium grained, very silty, some dark greenish-brown sandy clay		mediocre recovery, approximately 1 foot of sample, Hnu is not responding to felt tip marker, battery okay
14.0-16.0	sand; yellowish-brown, very fine to medium grained, fairly clean near 14.5, clay; brown at 15.0, then small gravel near 15. more clay; yellowish-brown, very sandy from 15.5 to 16.0, interval is wet	5,	no odor
16.0-18.0	sand; yellowish-brown, very fine to medium grained, more clayey thru interval		no odor
18.0-20.0	clay; yellowish-brown, sandy to 18.5, below 18.5 the clay is dark greenish-brown, silty		no odor; gasoline odor on water level probe

Boring number: GP-6 Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 29, 1995 Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling
Geologist\Observor: John McDermott. Capsule

Depth (feet)	Lithologic Description	OVM Reading (ppm)	Notes
0.0-2.0	fill; sandy gravel (0-1+), then clay; dark grey to black, dense	13.0	no odor
2.0-4.0	clay; black, to 3 (+), then more sandy material	7.0	no odor
4.0-6.0	fill; clayey, wood debris and small pieces of plastic sheeting, by 5.0 (+) clay; yellowish brown, silty	 -	
6.0-8.0	clay; brown to yellowish-brown, dense, ne slightly silty	6.0	earthy odor
8.0-10.0	clay; dark brown, silty, dense grained, very silty	2.5	no odor; took photo of GP-6 location
10.0-12.0	clay (10.0 to 10.5); yellowish-brown, sandy sand (10.5-12.0); yellow brown, very fine to fine grained, damp		
12.0-14.0	sand; yellowish-brown, very fine to medium grained, slightly less clayey than above, clay from 13.0 to 13.5	4.5	no odor
14.0-16.0	sand; darker greenish to yellowish-brown, fine to very fine grained, very clayey, some interlayered clay	2.8	no odor
16.0-18.0	clay (16.0-16.5); yellowish-brown, sandy sand (16.5-18.0); yellowish to greenish-brown clayey, cleaner and coarser at 17.5, wet	18.5	no odor
18.0-20.0	sand; yellowish to greenish-brown, fine to greyish-brown, fine to medium grained, very clayey, progressively more clayey from 18.5	17.0	no odor
	to 20.0, more claylike at 19.0 to 19.5, dark grey to black clay, dense		to 22.0; sand was gravelly, clay was

Boring number: GP-7

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 27, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

Geologist/Observer: John McDermott. Capsule

Depth (feet)	Lithologic Description	OVM Reading (ppm)	<u>Notes</u>
0.0-2.0	sand; brown to blackish brown, very clayey to silty, some rock fragments, dry	1.2	no odor
2.0-4.0	sand; brown to brownish-yellow, silty to clayey, damp	0.8	
4.0-6.0	sand; yellowish-brown to brown, fine grained, very silty	0.2	poor recovery due to loose material
6.0-8.0	sand; yellowish-brown, fine to very fine grained, slight cleaner than above (fewer fines)	0.2	
8.0-10.0	sand; yellowish-brown, fine to very fine grained, very silty	6.3	no odor; took photo of GP-7 location
10.0-12.0	sand; brown to yellowish -brown, very fine to medium grained, cleaner than above interval	0.4	no odor
12.0-14.0	sand; brown to yellowish-brown, very fine to medium grained, dirtier than above interval	4.3	no odor
14.0-16.0	sand; very coarse sand sized pieces	3.3	earthy odor; poor sample recovery as liner wedged inside sampler and had to be hammered out
16.0-18.0	sand; borwn, clayey, darker than above, some rounded pebbles, wet	5.5	no odor
18.0-20.0	sand and gravel; yellowish-brown to greyish-brown, variety of rock types, subangular to subrounded	5.5	no odor
20.0-22.0	sand from 20.0 to 20.5 and clay from 20.5 to 22.0; sand was gravelly, clay was brownish-grey to grey, silty	0.8	no odor

Boring number: GP-8

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 29, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

Geologist/Observer: John McDermott. Capsule

Note:

Depth (feet)	Lithologic Description	OVM Reading (ppm)	<u>Notes</u>
8.0-10.0	clay; dark brown, silty	0.0	no odor
10.0-12.0	clay; as above, gets sandier from 11.0 to 12.0, very clayey sand at 11.5(+) sand; yellowish-brown, fine grained		
12.0-14.0	sand; brown to greenish-brown, very clayey	13.0	no odor
14.0-16.0	sand; yellowish to greenish-brown, very fine to medium grained, silty some gravel pieces, pebble sized, subangular to subrounded	17.0	no odor
16.0-18.0	sand; brown, very fine to medium grained, gravel pieces make up 20-30% of sample, angular to subrounded, from 16.0 to 16.5 the sand is yellowish-brown	100.0	no odor
18.0-20.0	sand; brown, fine to coarse grained, 30-40% gravel, small pebble sized, at 19.5 clay; greyish-brown, sandy	50.0	no odor
20.0-22.0	sand; brown, finer grained than above, by 21.6 clay; brown to dark brown, sandy, then dens		no odor

TD

Boring number: GP-9

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 27, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

Geologist\Observor: John McDermott. Capsule

Depth (feet)	Lithologic Description	OVM Reading (ppm)	Notes
0.0-1.0	asphalt and base gravel		
1.0-3.0	clay; brown to sand; greenish-brown	2.1	no odor
3.0-5.0	clay to sand; brown, sand starts near 4 ft., some gravel pieces	0.8	no odor
5.0-7.0	sand; yellow brown to brown, very fine to medium grained; 30% gravel pieces; wet at 7 ft.	0.4	no odor
7.0-9.0	sand (7-8) and clay (8-9); sand as above, clay is dark greenish-brown and very sandy silty, clay is tight enough to "perch" water on top of it	0.4	no odor
9.0-11.0	clay; greenish-brown to brown, silty, sandy	0.4	
11.0-13.0	clay; as above, more sandy, some gravel grained, very silty	0.5	no odor; took photo of GP-9 location
13.0-15.0	clay; brown, sandy, also sand; yellowish- brown to brown, fine to medium grained, clayey, some reddish mottling on clay partings	0.6	no odor
15.0-17.0	sand; yellowish-brown to brown, very fine to medium grained, silty, by 16+ very coarse sand; brown, silty	0.4	no odor

Advanced hole to 20.0 feet to get additional saturated thickness for sampling. No soil sample noted.

TD

Boring number: GP-12

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 27, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

Geologist\Observer: John McDermott. Capsule

Depth (feet)	Lithologic Description	OVM Reading (ppm)	<u>Notes</u>
0.0-0.5	asphalt		
0.5-2.5	soil; black, clayey	0.0	no odor
2.5-4.5	clay; brown to yellow brown, sandy	0.0	no odor
4.5-6.5	clay; brown, very sandy, by 6.5 sand is becoming dominant	0.2	no odor
6.5-8.5	clay; greyish-brown to brown; silty grained, slight cleaner than above (fewer fines)	0.2	poor recovery
8.5-10.5	clay; dark blackish-brown to brown, silty	0.0	no odor
10.5-12.5	clay; brown to yellowish-brown, silty, sandier thru interval	0.0	no odor
12.5-14.5	clay; gravelly near 13.5, then sand; brown, fine to medium grained, silty, some subrounded to rounded gravel pebbles	0.0	no odor
14.5-16.5	sand from 14.5 to 15.5, then dark brown clay	0.0	
16.5-18.5	clay from 16.5 to 17.0, then very clayey sand; brown, mottled with reddish-brown, fine to medium grained, wet, clay at end of interval	0.0	no odor
18.5-19.5	sand; brown to yellowish-brown, very fine to medium grained, silty, wet		poor returns; had pushed sampler to confirm clay seen at 18.5
19.5-21.5 TD	sand; yellowish-brown, very clayey, fine graine at 20.5 clay, blackish-brown, dense	ed 0.0	no odor

Project: Ingersoll-Rand Equipment Sales (San Leandro) Boring number: GP-13

Surface elevation: 30 ft (+/- 5 ft.) Date boring installed: June 28, 1995

Installation method: Geoprobe model GH-40, continuously sampled

Company: Gregg Drilling

Geologist\Observer: John McDermott. Capsule

Depth (feet)	Lithologic Description	OVM Reading (ppm)	<u>Notes</u>	
0.0-2.0	fill material; some sand, gravel, greenish clayey silt	3.3	no odor	
2.0-4.0	fill material? to 3.0 then brown clayey silt to silty clay	0.6	no odor	
4.0-6.0	silt; clayey, dark brown to brown	0.4	no odor	
6.0-8.0	silt to fine grained sand; brown to yellowish- brown, sandier thru interval, still very clayey	1.2	no odor	
8.0-10.0	sand; yellowish brown to brown, fine to medium grained, silty, slightly cleaner with depth	0.2	no odor; poor recovery	
10.0-12.0	clay; from 10.0 to 10.5, blackish-brown sand from 10.5 to 12; "dirty brown to yellowish-brown to brown, fine to medium grained, silty			
12.0-14.0	sand; brown to yellowish-brown, fine to medium grained, silty, clayey by 13.5 then sandy brown clay to 14.0	0.4	no odor	
14.0-16.0	early in interval sand gets much more clayey, by 15.0 clay; dark greenish-brown, silty, some reddish iron staining	0.5	no odor	0.5

TD

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



July 14, 1995

Mr. Jay Mattsfield CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue St. Paul, MN 55113

> Client Ref.: NONE Clayton Project No.: 95064.22

Dear Mr. Mattsfield:

Attached is our analytical laboratory report for the samples received on June 29, 1995. Please note that we were unable to report results for Nitrate as "dissolved" since the samples were not filtered prior to sample preservation. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after August 13, 1995, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Michael Fynch fa

Director, Laboratory Services San Francisco Regional Office

HAH/tjb

Attachments

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Sample Identification: GP-8

9506422-01A

Sample Matrix/Media: WATER
Preparation Method: EPA 5030A Method Reference:

Lab Number:

EPA 8260A

Date Sampled:

06/29/95 Date Received: 06/29/95

Date Prepared: Date Analyzed:

07/10/95 07/10/95

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			,
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroform	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3	ND N	2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5	ND N) ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Sample Identification: GP-8

9506422-01A Lab Number:

Sample Matrix/Media: Preparation Method:

Method Reference:

WATER

EPA 5030A

EPA 8260A

Date Sampled:

Date Received: Date Prepared:

07/10/95 Date Analyzed: 07/10/95

Analyst: JP

06/29/95

06/29/95

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	inued)		
1,2-Dichloropropane	78-87-5	ND	5
_ 1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58 - 6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
trans-1,3-dichloropropene Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
_ p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
_ tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5 5 5 5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	41	5
1,1,2-Trichloroethane	79-00-5	ND	, 5
Trichloroethene	79-01-6	ND	[′] 5
_ Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

sample Identification: Lab Number: ample Matrix/Media: reparation, Method: Method Reference:	GP-8 9506422-01A WATER EPA 5030A EPA 8260A		Date Sampled: Date Received: Date Prepared: Date Analyzed: Analyst:	: 06/29/95 : 07/10/95
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compo	unds (Continue	ed)		
1,2,4-Trimethylbenzer 1,3,5-Trimethylbenzer Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes		95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
<u>Surrogates</u>			Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-de Toluene-d8	4 .	460-00-4 1868-53-7 17060-07-0 2037-26-5	106 112 114 104	86 - 115 86 - 118 76 - 114 88 - 110

Not detected at or above limit of detection Information not available or not applicable

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

sample Identification: FIELD BLANK Lab Number:

9506422-02A

Date Received: Date Prepared: Date Analyzed:

Date Sampled:

06/29/95 06/29/95 07/10/95

Tample Matrix/Media: WATER reparation Method: EPA 5030A Method Reference: EPA 8260A

07/10/95 Analyst: JΡ

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Olatile Organic Compounds			
Acetone	67-64-1 71-43-2	ND ND	20 5
Benzene Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
_ Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
■ 2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
_ 1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5 5
1,4-Dichlorobenzene	106-46-7	ND	5 5
Dichlorodifluoromethane	75-71-8	ND	5 5
1.1-Dichloroethane	75-34-3	ND	5 5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND ND	5 5
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	156-59-2 156-60-5	ND	5

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Sample Identification: FIELD BLANK Lab Number:

9506422-02A

06/29/95 06/29/95

Sample Matrix/Media: reparation Method: EPA 5030A

WATER

Date Received: Date Prepared: 07/10/95 Date Analyzed: 07/10/95

Method Reference: EPA 8260A

Analyst: JР

Date Sampled:

	· · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , ,	
analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	tinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane Trichloroethene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-01-6	ND N	55555555055555555555555555555555555555
Trichlorofluoromethane 1,2,3-Trichloropropane	75-69-4 96-18-4	ND ND	5 5

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Sample Identification: FIELD BLANK Date Sampled: 06/29/95 Lab Number: 9506422-02A Date Received: 06/29/95 Sample Matrix/Media: Date Prepared: 07/10/95 WATER reparation Method: EPA 5030A Date Analyzed: 07/10/95 Method Reference: EPA 8260A Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Co	ontinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes Surrogates	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND ND	5 5 10 5 5 5 5 0C Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	107 117 114 102	86 - 115 86 - 118 76 - 114 88 - 110

D: Not detected at or above limit of detection -: Information not available or not applicable

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

sample Identification: GP-6

Lab Number:

9506422-03A

ample Matrix/Media:

WATER

reparation Method: EPA 5030A Method Reference:

EPA 8260A

Date Sampled: Date Received: 06/29/95 06/29/95

Date Prepared: Date Analyzed:

07/10/95 07/10/95

Analyst:

JР

inalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane 2-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3	ND N	055555055555555555555555555555555555555
1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	107-06-2 75-35-4 156-59-2 156-60-5	ND ND ND	5 5 5

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: GP-6

Lab Number:

9506422-03A

lample Matrix/Media:

WATER

EPA 5030A

Date Analyzed:

Date Sampled:

Date Received:

06/29/95 06/29/95

Date Prepared:

07/10/95

07/10/95

Analyst:

JΡ

Method	Reference	:
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reparation Method:

EPA 8260A

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Wolatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene setr-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6	ND N	55555555555555555555555555555555555555
1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,2,3-Trichloropropane	79-00-5 79-01-6 75-69-4 96-18-4	ND ND ND ND	5 5 5 5

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

sample Identification: GP-6 Date Sampled: 06/29/95 Lab Number: 9506422-03A Date Received: 06/29/95 Date Prepared: Sample Matrix/Media: WATER 07/10/95 reparation Method: EPA 5030A Date Analyzed: 07/10/95 Method Reference: EPA 8260A Analyst: JΡ

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Wolatile Organic Compounds (Co	ntinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes Surrogates	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND ND Recovery (%)	5 5 10 5 5 5 5 0C Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	104 108 113 102	86 - 115 86 - 118 76 - 114 88 - 110

D: Not detected at or above limit of detection-: Information not available or not applicable



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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: GP-11

Lab Number:

9506422-04A

fample Matrix/Media:

WATER

reparation Method: EPA 5030A Method Reference: EPA 8260A

Method Reference:

EPA 8260A

Date Sampled: Date Received: 06/29/95 06/29/95

Date Prepared:

07/11/95

Date Analyzed:

07/11/95

Analyst:

JP

			Method Detection
		Concentration	Limit
E nalyte	CAS #	(ug/L)	(ug/L)

nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
Wolatile Organic Compounds			
Acetone Benzene	67-64-1	ND	400
	71-43-2	ND	100
Bromobenzene Bromochloromethane Bromodichloromethane	108-86-1	ND	100
	74-97-5	ND	100
	75-27-4	ND	100
Bromodichioromethane Bromomethane	75-27-4 75-25-2 74-83-9	ND ND	100 100
2-Butanone n-Butylbenzene	78-93-3 104-51-8 75-15-0	ND ND	400 100 100
Carbon disulfide Carbon tetrachloride Chlorobenzene	56-23-5 108-90-7	ND ND ND	100 100 100
Chloroethane	75-00-3	ND	100
Chloroform	67-66-3	ND	100
Chloromethane 2-Chlorotoluene 4-Chlorotoluene	74-87-3	ND	100
	95-49-8	ND	100
	106-43-4	ND	100
Dibromochloromethane 1,2-Dibromo-3-chloropropane	124-48-1	ND	100
	96-12-8	ND	100
1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene	106-93-4	ND	100
	74-95-3	ND	100
	95-50-1	ND	100
1.3-Dichlorobenzene	541-73-1	ND	100
1.4-Dichlorobenzene	106-46-7	ND	100
Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane	75-71-8	ND	100
	75-34-3	ND	100
	107-06-2	ND	100
1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	75-35-4	ND	100
	156-59-2	ND	100
	156-60-5	ND	100

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: GP-11

Lab Number:

9506422-04A

Sample Matrix/Media:

Method Reference:

WATER

reparation Method: EPA 5030A Method Reference: EPA 8260A EPA 8260A

Date Analyzed:

06/29/95 06/29/95

Date Prepared:

Date Sampled:

Date Received:

07/11/95

07/11/95

Analyst:

JΡ

			Method Detection
		Concentration	Limit
nalyte	CAS #	(ug/L)	(ug/L)

malyte	CAS #	Concentration (ug/L)	Limit (ug/L)
Yolatile Organic Compounds (Cont	inued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichloroethene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5 79-01-6	ND N	100 100 100 100 100 100 100 100 100 100
Trichlorofluoromethane 1,2,3-Trichloropropane	75-69-4 96-18-4	ND	100

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06/29/95

06/29/95

86 - 115

86 - 118

76 - 114

88 - 110

Date Sampled:

112

108

109

105

Date Received:

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

07/11/95 Date Prepared: ample Matrix/Media: WATER 07/11/95 Date Analyzed: reparation Method: EPA 5030A Analyst: JΡ EPA 8260A Method Reference: Method Detection Limit Concentration CAS # (ug/L) (ug/L) nalyte olatile Organic Compounds (Continued) 100 95-63-6 2000 1,2,4-Trimethylbenzene 108-67-8 500 100 1,3,5-Trimethylbenzene 200 108-05-4 ND Vinyl acetate 100 ND 75-01-4 Vinyl chloride 100 400 95-47-6 o-Xylene 1800 100 p,m-Xylenes Recovery (%) OC Limits (%)

460-00-4

1868-53-7

2037-26-5

17060-07-0

Not detected at or above limit of detection Information not available or not applicable

ample Identification: GP-11

Lab Number:

Surrogates

Toluene-d8

4-Bromofluorobenzene

Dibromofluoromethane

1,2-Dichloroethane-d4

Detection limits increased due to matrix interference.

9506422-04A



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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: TRIP BLANK

cis-1,2-Dichloroethene

trans-1,2-Dichloroethene

Lab Number:

9506422-05A

WATER

¶ample Matrix/Media: reparation Method: EPA 5030A Method Reference: EPA 8260A

Date Sampled:

Date Received: Date Prepared:

06/29/95 07/11/95 07/11/95

5

Date Analyzed:

Analyst:

JΡ

neemod kererenee.		- ·	-
nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Yolatile Organic Compounds			
Acetone	67-64-1	ND ·	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
■ Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
_ n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
■ 2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
_ 1,2-Dibromo-3-chloropropane	96-12-8	ND	5 5 5 5 5 5 5 5 5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
	166_60_3	MT)	5

156-59-2

156-60-5

ND

ND

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Sample Identification: TRIP BLANK

Lab Number:

9506422-05A

Fample Matrix/Media:

WATER

Preparation Method: EPA 5030A Method Reference:

EPA 8260A

Date Received: 06/29/95

Date Analyzed:

Date Sampled:

Date Prepared: 07/11/95 07/11/95

Analyst: JF

	<u>,</u>	
	Concentration (ug/L)	tion nit
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ND N	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
. 20 5 5 5 5	ND ND ND ND ND ND	20 5 5 5 5 5
5 5 5 5 5 5 5 5 5 5 5 5 5	ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	ND	

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: TRIP BLANK

Lab Number:

9506422-05A

ample Matrix/Media: reparation Method: EPA 5030A

WATER EPA 8260A Date Sampled:

Date Received: 06/29/95 07/11/95 Date Prepared: Date Analyzed: 07/11/95

Analyst:

JΡ

Method Reference:	EPA	8260A		Analyst:	JP
nalyte			CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Com	pounds	(Continue	<u>ed)</u>		

urrogates	,	Recovery (%)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	103	86 - 115
Dibromofluoromethane	1868-53-7	111	86 - 118
1,2-Dichloroethane-d4	17060-07-0	113	76 - 114
Toluene-d8	2037-26-5	102	88 - 110

Not detected at or above limit of detection Information not available or not applicable

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9506422-06A

Date Received:

Sample Matrix/Media: reparation Method:

WATER EPA 5030A

Date Prepared: 07/11/95 Date Analyzed: 07/11/95

Method Reference:	
-------------------	--

EPA 8260A

Analyst: JΡ

inalyte .	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Yolatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5 5
Bromomethane	74-83-9	ND	20
2-Butanone	78-93-3	ND	20 5
n-Butylbenzene	104-51-8 75-15-0	ND ND	5 5
Carbon disulfide	75-15-0 56-23-5	ND ND	5
- Carbon cecrachioride	108-90-7	ND	5
Chlorobenzene	75-00-3	ND	5
Chloroethane	67-66-3	ND	5
Chloroform	74-87-3	ND	5
Chloromethane	95-49-8	ND	5
2-Chlorotoluene	106-43-4	· ND	5
4-Chlorotoluene Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane.	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5 5 5 5 5 5
■ 1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
■ 1.1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75~35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: METHOD BLANK

Lab Number:

9506422-06A

ample Matrix/Media: reparation Method: EPA 5030A

WATER

Method Reference:

EPA 8260A

Date Sampled:

Date Received:

Date Prepared: 07/11/95 Date Analyzed: 07/11/95

Analyst:

JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Wolatile Organic Compounds (Cont	inued)		
1,2-Dichloropropane	78-87-5	ND	5 5
_ 1,3-Dichloropropane	142-28-9	ND ND	5 5
2,2-Dichloropropane	594-20-7	ND ND	5
1,1-Dichloropropene	563-58-6	ND ND	5
cis-1,3-dichloropropene	10061-01-5 10061-02-6	ND ND	5
trans-1,3-dichloropropene	100-41-4	ND ND	5
Ethylbenzene	76-13-1	ND ND	5
Freon 113	87-68-3	ND ND	5
Hexachlorobutadiene	591-78-6	ND	20
2-Hexanone	98-82-8	ND	5
Isopropylbenzene	99-87-6	ND	5
p-Isopropyltoluene	75-09-2	ND	5
Methylene chloride	108-10-1	ND	20
4-Methyl-2-pentanone	91-20-3	ND	5
Naphthalene	103-65-1	ND	5
n-Propylbenzene	135-98-8	ND	5
sec-Butylbenzene	100-42-5	ND	5
Styrene tert-Butylbenzene	98~06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
■ 1.1.1-Trichloroethane	71-55-6	ND	5 5 5 5
1,1,1-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 19 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: METHOD BLANK Lab Number:

ample Matrix/Media:

reparation Method: EPA 5030A

9506422-06A WATER

Date Sampled: Date Received:

Date Prepared: 07/11/95 Date Analyzed:

07/11/95

Method Reference:	EPA 8260A		Analyst:	JP
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Comp	ounds (Continu	led)		
1,2,4-Trimethylbenz 1,3,5-Trimethylbenz Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes		95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
<u>Surrogates</u>			Recovery (%)	OC Limits (%)
4-Bromofluorobenzen Dibromofluoromethan 1,2-Dichloroethane- Toluene-d8	e	460-00-4 1868-53-7 17060-07-0 2037-26-5	108 114 114 101	86 - 115 86 - 118 76 - 114 88 - 110

Not detected at or above limit of detection Information not available or not applicable

Page 20 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Sample Identification: GP-8

Lab Number:

9506422-01C

Sample Matrix/Media: WATER Preparation Method: EPA 5030 Method Reference:

EPA 8015/8020

Date Sampled:

06/29/95 Date Received: 06/29/95 07/06/95 Date Prepared: 07/06/95 Date Analyzed:

Analyst:

WAS

	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4

Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes		ND	0.4
Gasoline		ND	50

urrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	86	50 - 150

Not detected at or above limit of detection Information not available or not applicable

Page 21 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Date Sampled: 06/29/95 ample Identification: FIELD BLANK Date Received: 06/29/95 Lab Number: 9506422-02C Date Prepared: 07/07/95 Sample Matrix/Media: WATER reparation Method: EPA 5030 Date Analyzed: 07/07/95 WAS Analyst: EPA 8015/8020 Method Reference:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
RTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes		ND	0.4
Gasoline	wa wa	ND	50
urrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	94	50 - 150

D: Not detected at or above limit of detection --: Information not available or not applicable

Page 22 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: GP-6

Lab Number:

9506422-03C

ample Matrix/Media: reparation Method: EPA 5030

WATER

Method Reference:

EPA 8015/8020

Date Sampled: Date Received:

06/29/95 06/29/95 Date Prepared: 07/06/95 Date Analyzed: 07/06/95

Analyst:

WAS

echod Reference.	2111 00137 0010		• · · · · · · · · · · · · · · · · · · ·	
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline				
Benzene		71-43-2	ND	0.4
_ Ethylbenzene		100-41-4	ND	0.3
Toluene		108-88-3	ND	0.3
<u> </u>		4		

<u>urrogates</u>		Recovery (%)	QC Limits (%)
<u>urrogates</u>		Recovery (%)	QC Limits (%)
Gasoline		ND	50
p,m-Xylenes		ND	0.4
o-Xylene	95-47-6	ND	0.4

a,a,a-Trifluorotoluene

98-08-8

95

50 - 150

Not detected at or above limit of detection Information not available or not applicable

Page 23 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

Date Sampled: 06/29/95 ample Identification: GP-11 Date Received: 06/29/95 Lab Number: 9506422-04C 07/06/95 Date Prepared: ample Matrix/Media: WATER EPA 5030 Date Analyzed: 07/06/95 reparation Method: Analyst: WAS Method Reference: EPA 8015/8020

nalyte	. CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	120 770 5.7 320 1500 14000	0.4 0.3 0.3 0.4 0.4
<u>Surroqates</u>		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	124	50 - 150

D: Not detected at or above limit of detection --: Information not available or not applicable

Page 24 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: TRIP BLANK

Lab Number:

9506422-05B

Matrix/Media:

WATER

reparation Method: EPA 5030 Method Reference:

EPA 8015/8020

Date Sampled:

Date Received: Date Prepared:

06/29/95 07/07/95 07/07/95

Date Analyzed: Analyst:

WAS

	, •••	<u>-</u>	
nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4
<u>Surrogates</u>		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

Not detected at or above limit of detection Information not available or not applicable

Page 25 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: METHOD BLANK

Lab Number:

9506422-06A

ample Matrix/Media: WATER reparation Method: EPA 5030 Method Reference: EPA 8015/8020

Method Reference:

Date Sampled:

Date Received:

Date Prepared: 07/07/95 Date Analyzed: 07/07/95

Analyst:

WAS

nalyte	CAS #	Concentration CAS # (ug/L)				
TEX/Gasoline						
Benzene	71-43-2	ND	0.4			
Ethylbenzene	100-41-4	ND	0.3			
Toluene o-Xvlene	108-88-3	ND	0.3			
o-Xylene	95-47-6	ND	0.4			
p,m-Xylenes		ND	0.4			
Gasoline	- -	ND	50			
<u>urroqates</u>		Recovery (%)	QC Limits (%)			
a,a,a-Trifluorotoluene	98-08-8	88	50 - 150			

Not detected at or above limit of detection Information not available or not applicable

Date Received: 06/29/95

Date Analyzed: 07/03/95

Page 26 of 26

Analytical Results

for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95064.22

ample Identification: See Below

Lab Number:

9506422

ample Matrix/Media:

WATER

lethod Reference:

EPA 353.2

01 (Sample Identification	Date Sampled	Nitrate-N (mg/L)	Method Detection Limit (mg/L)
01	GP-8	06/29/95	12	0.05
	GP-6	06/29/95	0.48	0.05
	GP-11	06/29/95	<0.05	0.05
06	METHOD BLANK		<0.05	0.05

Not detected at or above limit of detection Information not available or not applicable



REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

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Project No.			
Batch No.	9506	722	
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<u>Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. tabs listed below:</u>

Novi, MI 48375 (810) 344-1770

22345 Roethel Drive Raritan Center 160 Fieldcrest Ave. Edison, NJ 08837 (908) 225-6040

400 Chastain Center Blvd., N.W. Suite 490

Kennesaw, GA 30144 (404) 499-7500

1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

DISTRIBUTION:

WHITE - Clayton Laboratory YELLOW - Clayton Accounting PINK - Client Retains



Novi, MI 48375

(810) 344-1770

160 Fieldcrest Ave.

Edison, NJ 08837

(908) 225-6040

Suite 490

Kennesaw, GA 30144

(404) 499-7500

REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

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	lease return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below: 22345 Roethel Drive Raritan Center 400 Chastain Center Blvd., N.W. 1252 Quarry Lane DISTRIBUTION:																	
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Pleasanton, CA 94566

(510) 426-2657

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



July 12, 1995

Mr. Jay Mattsfield CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue St. Paul, MN 55113

> Client Ref.: NONE Clayton Project No.: 95063.81

Dear Mr. Mattsfield:

Attached is our analytical laboratory report for the samples received on June 27, 1995. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after August 11, 1995, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Director, Laboratory Services

San Francisco Regional Office

HAH/tjb

Attachments



Page 2 of 26

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-7

9506381-01A

ab Number: ample Matrix/Media: Preparation Method:

WATER

Method Reference:

EPA 8260A

EPA 5030A

Date Received: Date Prepared: Date Analyzed:

Date Sampled:

06/27/95 07/10/95 07/10/95

06/27/95

Analyst:

JΡ

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane	67-64-1	ND	20
	71-43-2	ND	5
	108-86-1	ND	5
	74-97-5	ND	5
	75-27-4	ND	5
	75-25-2	ND	5
	74-83-9	ND	5
2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene	78-93-3	ND	20
	104-51-8	ND	5
	75-15-0	ND	5
	56-23-5	ND	5
	108-90-7	ND	5
Chloroethane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene	75-00-3 67-66-3 74-87-3 95-49-8 106-43-4	ND ND ND ND	5 5 5 5 5
Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene	124-48-1	ND	5
	96-12-8	ND	5
	106-93-4	ND	5
	74-95-3	ND	5
	95-50-1	ND	5
	541-73-1	ND	5
1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane	106-46-7 75-71-8 75-34-3 107-06-2 75-35-4	ND ND ND ND ND	5 5 5 5 5
1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	156-59-2	ND	5
	156-60-5	ND	5

Page 3 of 26

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-7

9506381-01A

ab Number: 950638 ample Matrix/Media: WATER

Preparation Method: EPA 5030A

Method Reference:

EPA 8260A

Date Received: Date Prepared: Date Analyzed:

Date Sampled:

06/27/95 07/10/95 07/10/95

06/27/95

JP Analyst:

				Method Detection
			Concentration	Limit
nalyte	CAS	#	(ug/L)	(ug/L)

unalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
olatile Organic Compounds (Cont	inued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichloroethene Trichloroethene Trichloroethene Trichloroethene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-01-6 75-69-4	ND N	555555555555555555555555555555555555555
1,2,3-Trichloropropane	96-18-4	ND	J

Page 4 of 26

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Date Sampled: 06/27/95 Sample Identification: GP-7 ab Number: ample Matrix/Media: Date Received: 06/27/95 9506381-01A Date Prepared: 07/10/95 WATER Date Analyzed: EPA 5030A 07/10/95 Preparation Method: EPA 8260A Analyst: JΡ Method Reference:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	21 ND ND ND 6 18	5 5 10 5 5 5
urrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	109 111 114 101	86 - 115 86 - 118 76 - 114 88 - 110

ND: Not detected at or above limit of detection --: Information not available or not applicable



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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-9

9506381-02A

ab Number: ample Matrix/Media:

WATER

Preparation Method:

EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received:

06/27/95 06/27/95

Date Prepared: Date Analyzed:

07/10/95

07/10/95

Analy	st:	JP
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halyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
platile Organic Compounds Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	
Bromochloromethane	74-97-5	ND	5 5 5 5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
- Bromomethane	74-83-9	ND	
_ 2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5 5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5 5 5 5 5 5
Chloroform	67-66-3	ND	
Chloromethane	74-87-3 95-49-8	ND	
2-Chlorotoluene	106-43-4	ND ND) E
4-Chlorotoluene	124-48-1	ND	
Dibromochloromethane	96-12-8	ND	5 E
1,2-Dibromo-3-chloropropane	106-93-4	ND	5
1,2-Dibromoethane	74-95-3	ND	
Dibromomethane	95-50-1	ND	5 5 5 5 5 5
1,2-Dichlorobenzene 1,3-Dichlorobenzene	541-73-1	ND	<u> </u>
1,4-Dichlorobenzene	106-46-7	ND	<u>, </u>
■ Dichlorodifluoromethane	75-71-8	ND	7
1,1-Dichloroethane	75-34-3	ND	Ĭ
1,2-Dichloroethane	107-06-2	ND	ຊັ
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81.

Sample Identification: GP-9

ab Number: ample Matrix/Media:

Preparation Method: Method Reference:

9506381-02A

WATER EPA 5030A EPA 8260A Date Sampled: Date Received: Date Prepared:

06/27/95 07/10/95 07/10/95

06/27/95

Date Analyzed: Analyst:

JΡ

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Co	ntinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane 1,2,3-Trichloropropane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-01-6 75-69-4 96-18-4	ND N	55555555555555555555555555555555555555



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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-9 ab Number: 9506381-02A Date Received: 06/27/95 Date Received: 06/27/95 Date Received: 07/10/95 Date Prepared: 07/10/95 Date Analyzed: 07/10/95 Method Reference: EPA 8260A Analyst: JP			Concentration	Method Detection Limit
ab Number: 9506381-02A Date Received: 06/27/95 ample Matrix/Media: WATER Date Prepared: 07/10/95	~	EPA 8260A	Analyst:	JP
	ab Number: ample Matrix/Media:	9506381-02A WATER	Date Received: Date Prepared:	06/27/95 07/10/95

nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
olatile Organic Compounds (Cont	cinued)		
1,2,4-Trimethylbenzene	95-63-6	ND	5
1,3,5-Trimethylbenzene	108-67-8	ND	5
Vinyl acetate	108-05-4	ND	1.0
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	ND	5
p,m-Xylenes		ND	5

<u>Surrogates</u>		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4	104	86 - 115
	1868-53-7	111	86 - 118
	17060-07-0	114	76 - 114
	2037-26-5	97	88 - 110

Not detected at or above limit of detection ND: Information not available or not applicable

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: FIELD BLANK

9506381-03A

06/27/95

ab Number: ample Matrix/Media:

WATER

Date Received: 06/27/95 Date Prepared: 07/10/95 Date Analyzed:

Preparation Method: Method Reference:

EPA 5030A EPA 8260A

Analyst:

07/10/95

JΡ

Date Sampled:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
platile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
■ Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
_ 2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
_ Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
_ Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5 5 5 5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	
1,4-Dichlorobenzene	106-46-7	ND	5 5
■ Dichlorodifluoromethane	75-71-8	ND	5 5
1,1-Dichloroethane	75-34-3	ND	ວ 5
1,2-Dichloroethane	107-06-2	ND	
1,1-Dichloroethene	75-35-4	ND	5 - 5
cis-1,2-Dichloroethene	156-59-2	ND	5 5
trans-1,2-Dichloroethene	156-60-5	ND	Þ



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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: FIELD BLANK

Trichlorofluoromethane

1,2,3-Trichloropropane

9506381-03A

Date Sampled: 06/27/95 06/27/95

ab Number: ample Matrix/Media: Preparation Method:

WATER

Date Received: Date Prepared: 07/10/95 Date Analyzed: 07/10/95

EPA 5030A

ethod Reference:

EPA 8260A

Analyst:

JΡ

5

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Cont	tinued)		
_ 1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5 5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
	75 60 4	NIT)	Ę

75-69-4

96-18-4

ND

ND

Date Sampled:

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06/27/95

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Tab Number: ample Matrix/Media: Preparation Method: Method Reference:	9506381-03A WATER EPA 5030A EPA 8260A		Date Received: Date Prepared: Date Analyzed: Analyst:	: 07/10/95
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compo	ınds (Continue	<u>ed)</u>		/
1,2,4-Trimethylbenzer 1,3,5-Trimethylbenzer Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes		95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates			Recovery (%)	OC Limits (名)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-de Toluene-d8	1	460-00-4 1868-53-7 17060-07-0 2037-26-5	107 111 112 104	86 - 115 86 - 118 76 - 114 88 - 110

Not detected at or above limit of detection ₹D: Information not available or not applicable

Sample Identification: FIELD BLANK

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-12

9506381-04A

ab Number: 9506381-04 ample Matrix/Media: WATER Preparation Method: EPA 5030A Method Reference:

EPA 8260A

Date Prepared: Date Analyzed:

06/27/95 06/27/95 07/10/95 07/10/95

Analyst: ĴΡ

Date Sampled:

Date Received:

Method

nalyte	CAS #	Concentration (ug/L)	Detection Limit (ug/L)
olatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2 108-86-1	ND ND	5 5
Bromobenzene	74-97-5	ND	5 5
Bromochloromethane Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
■ Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
■ Chloromethane	74-87-3	ND	5 5 5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5_
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
<pre>1,2-Dibromoethane</pre>	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
<pre>1,2-Dichlorobenzene</pre>	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5 5
1,1-Dichloroethene	75-35-4	ND	5 5
cis-1,2-Dichloroethene	156-59-2	ND	5 5
trans-1,2-Dichloroethene	156-60-5	ND	כ

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-12

9506381-04A

ab Number: 9506381-04 ample Matrix/Media: WATER Preparation Method: EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received: Date Prepared:

06/27/95 06/27/95 07/10/95

Date Analyzed:

07/10/95

JΡ Analyst:

nalyte		(ug/L)	(ug/L)
platile Organic Compounds (Continued).		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene	78-87-5 142-20-7 594-20-7 563-58-6 0061-02-6 100-41-4 76-13-3 591-78-6 98-87-6 98-87-6 98-87-9 103-65-1 135-98-8 103-42-5 98-00-4 135-98-6 79-34-5 127-18-4 108-82-1 71-55-6 79-01-6 79-01-6 79-69-4 96-18-4	ND N	55555555555555555555555555555555555555

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

tab Number: Sample Matrix/Media: Preparation Method:	GP-12 9506381-04A WATER EPA 5030A EPA 8260A		Date Sampled: Date Received: Date Prepared: Date Analyzed: Analyst:	06/27/95 07/10/95
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compou	nds (Continue	ed)		
1,2,4-Trimethylbenzen 1,3,5-Trimethylbenzen Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes		95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates			Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8		460-00-4 1868-53-7 17060-07-0 2037-26-5	100 115 114 101	86 - 115 86 - 118 76 - 114 88 - 110

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: TRIP BLANK mab Number: ample Matrix/Media:

9506381-05A WATER

Date Received: Date Prepared: Date Analyzed:

Date Sampled:

06/27/95 07/10/95 07/10/95

Method

06/27/95

Preparation Method:

EPA 5030A

Analyst:

Method Reference: EPA 8260A JР

nalyte	CAS #	Concentration (ug/L)	Detection Limit (ug/L)
olatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3	ND N	20 55 55 55 55 55 55 55 55 55
Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5	ND N	ភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភ



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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: TRIP BLANK Date Sampled: 06/27/95 ab Number: Date Received: 06/27/95 9506381-05A Date Prepared: 07/10/95 ample Matrix/Media: WATER Date Analyzed: 07/10/95 EPA 5030A Preparation Method: Analyst: JР EPA 8260A Method Reference:

Method
Detection
Concentration Limit
nalyte CAS # (ug/L) (ug/L)

nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
olatile Organic Compounds (Cont	cinued)		-
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5 5 5 5 5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
<pre>2-Hexanone</pre>	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
■ p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
■ Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	, ND	5
■ Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
■ 1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5 5 5 5 5 5 5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: TRIP BLANK Date Sampled: 06/27/95 Date Received: 06/27/95 ab Number: ample Matrix/Media: 9506381-05A Date Prepared: 07/10/95 WATER Date Analyzed: 07/10/95 EPA 5030A Preparation Method: Analyst: JP EPA 8260A Method Reference:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	105 99 97 106	86 - 115 86 - 118 76 - 114 88 - 110

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: METHOD BLANK

9506381-06A

ab Number: 9506381-06 ample Matrix/Media: WATER Preparation Method: EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received:

Date Prepared: Date Analyzed:

07/11/95 07/11/95

Analyst:

JP

CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-46-7 75-31-3 107-36-2 75-31-3 107-35-4	ND N	055555555555555555555555555555555555555
156-59-2	ND	5
	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-34-3 107-06-2 75-35-4 156-59-2	CAS # (ug/L) 67-64-1 ND 71-43-2 ND 108-86-1 ND 74-97-5 ND 75-27-4 ND 75-25-2 ND 74-83-9 ND 78-93-3 ND 104-51-8 ND 75-15-0 ND 56-23-5 ND 108-90-7 ND 75-00-3 ND 67-66-3 ND 74-87-3 ND 95-49-8 ND 106-43-4 ND 124-48-1 ND 96-12-8 ND 106-93-4 ND 74-95-3 ND 106-93-4 ND 74-95-3 ND 106-46-7 ND 541-73-1 ND 541-73-1 ND 106-46-7 ND 75-71-8 ND 75-34-3 ND 107-06-2 ND 75-35-4 ND

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Date Sampled: Sample Identification: METHOD BLANK ab Number: Date Received: 9506381-06A

Date Prepared: 07/11/95 ample Matrix/Media: WATER Preparation Method: EPA 5030A Method Reference: EPA 8260A Date Analyzed: 07/11/95

Analyst: JP Method Reference:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-01-6 75-69-4	ND N	555555555555555555555555555555555555555

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Tample Identification: METHOD BLANK Date Sampled: -Lab Number: 9506381-06A Date Received: --

Tample Matrix/Media: WATER Date Prepared: 07/11/95 reparation Method: EPA 5030A Date Analyzed: 07/11/95 Method Reference: EPA 8260A Analyst: JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Colatile Organic Compounds (Cor	ntinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND ND	5 5 10 5 5 5 5 0C Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	108 114 114 101	86 - 115 86 - 118 76 - 114 88 - 110

Page 20 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

ample Identification: GP-7

Lab Number:

9506381-01C

ample Matrix/Media: WATER reparation Method: EPA 5030

Method Reference:

EPA 8015/8020

Date Sampled: Date Received:

06/27/95 06/27/95

Date Prepared: Date Analyzed:

06/27/95 06/28/95

Analyst:

NAN

iccioa icacacineo.		-	
nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	- -	ND	0.4
Gasoline		ND	50
<u>urrogates</u>		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluen	98-08-8	110	50 - 150

Page 21 of 26

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: GP-9

Lab Number:

9506381-02C

Sample Matrix/Media:

Preparation Method: EPA 5030

WATER

Date Sampled:

06/27/95 Date Received: 06/27/95 Date Prepared:

Date Analyzed:

06/27/95 06/28/95

Method Reference:	EPA 8015/8020		Analyst:	NAN
Analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline				
Benzene		71-43-2	ND	0.4
Ethylbenzene		100-41-4	ND	0.3
Toluene		108-88-3	ND	0.3
0 11/20110		95-47-6	ND	0.4
p,m-Xylenes			ND	0.4
Gasoline			ND	50
<u>Surrogates</u>			Recovery (%)	OC Limits (%)
a,a,a-Trifluorotolue	ene	98-08-8	112	50 - 150
-				

Page 22 of 26

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: FIELD BLANK Date Sampled: 06/27/95 Date Received: Lab Number: 9506381-03C 06/27/95 ample Matrix/Media: WATER Date Prepared: 06/27/95 reparation Method: EPA 5030 Date Analyzed: 06/28/95 EPA 8015/8020 Analyst: NAN Method Reference:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
■ Benzene	71-43-2	ND	0.4
_ Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	uppy union	ND	0.4
Gasoline		ND	50
<u>Surrogates</u>		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	109	50 - 150

Page 23 of 26

06/27/95

06/27/95

06/27/95

Date Prepared:

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

sample Identification: GP-12 Date Sampled: Date Received: Lab Number: 9506381-04C

ample Matrix/Media: WATER reparation Method: EPA 5030

06/28/95 Date Analyzed:

Method Reference:	EPA 8015/8020		Analyst:	NAN
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline				, , , , , , , , , , , , , , , , , , ,
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline		71-43-2 100-41-4 108-88-3 95-47-6	0.4 0.4 ND ND 0.5 ND	0.4 0.3 0.3 0.4 0.4
<u>Surrogates</u>			Recovery (%)	OC Limits (%)
a,a,a-Trifluorotolue	ene	98-08-8	121	50 - 150

Page 24 of 26

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: TRIP BLANK 9506381-05C Lab Number:

Sample Matrix/Media: Preparation Method:

WATER EPA 5030

Date Sampled: 06/27/95 Date Received: 06/27/95 Date Prepared: 06/27/95

06/28/95 Date Analyzed: Analust MAN

Method Reference:	EPA 8015/8020		Analyst:	NAN		
Analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)		
BTEX/Gasoline						
Benzene		71-43-2 100-41-4	ND ND	0.4 0.3		
Ethylbenzene Toluene		108-88-3	ND	0.3		
o-Xylene		95-47-6	ND	0.4		
p,m-Xylenes			ND	0.4		
Gasoline			ND	50		
<u>Surrogates</u>			Recovery (%)	QC Limits (%)		
a,a,a-Trifluorotoluen	e	98-08-8	110	50 - 150		
-						



Page 25 of 26

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

ample Identification: METHOD BLANK Lab Number:

ample Matrix/Media:

reparation Method: EPA 5030

Method Reference:

9506381-06A WATER

EPA 8015/8020

Date Sampled: Date Received: --

06/27/95 Date Prepared: Date Analyzed: 06/28/95

Analyst: NAN

	Limit (ug/L)	
71-43-2	ND	0.4
100-41-4	ND	0.3
108-88-3	ND	0.3
95-47-6	ND	0.4
	ND	0.4
	ND	50
	Recovery (%)	OC Limits (%)
98-08-8	100	50 - 150
	100-41-4 108-88-3 95-47-6 	100-41-4 ND 108-88-3 ND 95-47-6 ND ND ND Recovery (%)

Date Received: 06/27/95

Date Analyzed: 07/03/95

Page 26 of 26

Analytical Results

for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.81

Sample Identification: See Below

Lab Number:

9506381

WATER

Sample Matrix/Media: Method Reference:

EPA 353.2

Lab Number	Sample Identification	Date Sampled	Nitrate-N (mg/L)	Method Detection Limit (mg/L)
01	GP-7	06/27/95	1.2	0.05
-02	GP-9	06/27/95	1.5	0.05
	GP-12	06/27/95	5.1	0.05
04 06	METHOD BLANK		<0.05	0.05

ENVIRONMENTAL CONSULTANTS

REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton Use Or	nly Page of 2
Project No.	
Batch No.	9506381
Ind. Code	W.P.
Date Logged In	Ву
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Novi, MI 48375

160 Fieldcrest Ave. (810) 344-1770 Edison, NJ 08837 (908) 225-6040

400 Chastain Center Blvd., N.W.

Suite 490 Kennesaw, GA 30144 (404) 499-7500

1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

WHITE -Clayton Laboratory YELLOW - Clayton Accounting - Client Retains PINK



REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton Use Only	Pageof//
Project No.	
Batch No. 950	5381
Ind. Code	W.P.
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Explanation of Preservative:			of New York	ŏ	/			[5] [1]		Ζ,	/,	/,	/,	/,	
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Please return completed form and samples to one of the 22345 Roethel Drive Raritan Center 400 Cha			Consultants, Inc			elow:						ſ	DISTRI	BUTIO	N:

Novi, MI 48375 (810) 344-1770 160 Fieldcrest Ave. Edison, NJ 08837

(908) 225-6040

400 Chastain Center Blvd., N.W. Suite 490

Kennesaw, GA 30144

(404) 499-7500

1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

WHITE - Clayton Laboratory YELLOW - Clayton Accounting Client Retains PINK

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



July 13, 1995

Mr. Jay Mattsfield CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue St. Paul, MN 55113

Client Ref.: NONE
Clayton Project No.: 95063.95

Dear Mr. Mattsfield:

Attached is our analytical laboratory report for the samples received on June 28, 1995. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after August 12, 1995, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Director, Laboratory Services

San Francisco Regional Office

HAH/tjb

Attachments

Page 2 of 16

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-2

9506395-01A

ab Number: 950639 ample Matrix/Media: WATER Preparation Method: EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received: Date Prepared:

06/28/95 07/10/95 07/10/95

06/28/95

Date Analyzed:

A	n	al	У	S	τ	:	Ļ	ŀ	

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds			
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-71-8 75-34-3 107-06-2 75-35-4 156-59-2	ND N	1000 300 300 300 300 300 300 300 300 300
trans-1,2-Dichloroethene	156-60-5	ND	300

of 16 Page 3

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-2

ab Number:

ample Matrix/Media:

Preparation Method:

9506395-01A

WATER EPA 5030A

EPA 8260A

06/28/95 Date Sampled: 06/28/95 Date Received:

Date Prepared: 07/10/95 Date Analyzed: 07/10/95

JΡ Analyst:

Method Reference: Method Detection Limit Concentration CAS # (ug/L) (ug/L)nalyte atile Organic Compounds (Continued)

1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene styrene tert-Butylbenzene 1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5 79-01-6	ND N	300 300 300 300 300 300 300 300 300 300
	79-00-5 79-01-6	ND	300
Trichlorofluoromethane 1,2,3-Trichloropropane	75-69-4 96-18-4	ND ND	300 300

Page 4 of 16

Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Date Sampled: 06/28/95 Sample Identification: GP-2 Date Received: 06/28/95 hab Number: 950639 maple Matrix/Media: WATER Preparation Method: EPA 50 9506395-01A Date Prepared: 07/10/95

Date Analyzed: 07/10/95 EPA 5030A

Method Reference: EPA 82	260A	Analyst:	JP
nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
platile Organic Compounds (C	Continued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	3800 1100 ND ND 4200 9400	300 300 600 300 300 300
Surrogates		Recovery (%)	OC Limits (名)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	102 101 110 105	86 - 115 86 - 118 76 - 114 88 - 110

Not detected at or above limit of detection Information not available or not applicable

bte: Detection limits increased due to matrix interference.

Page 5 of 16

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-13

9506395-03A

Lab Number: 9506395-03
Cample Matrix/Media: WATER
Preparation Method: EPA 5030A

Method Reference:

EPA 8260A

Date Sampled: Date Received:

06/28/95 Date Prepared: 07/10/95 Date Analyzed: 07/10/95

Analyst:

JP

06/28/95

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Olatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND ND	5 5
■ Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5 75-27-4	ND ND	5
Bromodichloromethane	75-25-2	ND	5
Bromoform	74-83-9	ND	5
Bromomethane	74-63-9 78-93-3	ND	20
2-Butanone	104-51-8	ND	5
n-Butylbenzene Carbon disulfide	75-15-0	ND	5
Carbon distillide	56-23-5	ND	5
Carbon tetrachioride Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
- Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5 5 5 5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
■ 1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-13

ab Number: 9506395-03A

ample Matrix/Media: WATER Preparation Method: EPA 5030A Method Reference:

EPA 8260A

Date Sampled: Date Received: Date Prepared:

06/28/95 07/10/95 07/10/95

06/28/95

Date Analyzed:

Analyst: JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene set-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichloroethene Trichloroethene Trichloroethene Trichloroethene Trichloroethene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-01-6 75-69-4	ND N	555555555555555555555555555555555555555
1,2,3-Trichloropropane	96-18-4	ND	5

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06/28/95

06/28/95

07/10/95

Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-13 Date Sampled:

ab Number: 9506395-03A Date Received:

ample Matrix/Media: WATER Date Prepared:

Preparation Method: EPA 5030A Date Analyzed: 07/10/95

Method Reference: EPA 8260A Analyst: JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2,4-Trimethylbenzene	95-63-6	ND	5 5
1.3.5-Trimethylbenzene	108-67-8	ND	
1,3,5-Trimethylbenzene Vinyl acetate	108-05-4	ND	10
Vinvl chloride	75-01-4	ND	5 5 5
o-Xvlene	95-47-6	ND	5
o-Xylene p,m-Xylenes		ND	5
urrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	104	86 - 115
Dibromofluoromethane	1868-53-7	112	86 - 118
1,2-Dichloroethane-d4	17060-07-0	114	76 - 114
Toluene-d8	2037-26-5	103	88 - 110
10140110 40	- -		

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: METHOD BLANK

Date Sampled:

ab Number:

9506395-05A

Date Received:

ample Matrix/Media:

WATER

07/11/95 Date Prepared: 07/11/95 Date Analyzed:

Preparation Method:

EPA 5030A

Method Reference:

EPA 8260A

Analyst: JΡ

Method Detection Limit Concentration (ug/L) CAS # (ug/L) nalyte <u>olatile Organic Compounds</u> 20 ND 67-64-1 Acetone 5 71-43-2 ND Benzene 5 ND 108-86-1 Bromobenzene 5 74-97-5 ND Bromochloromethane 5 75-27-4 MD Bromodichloromethane 5 75-25-2 ND Bromoform 5 ND 74-83-9 Bromomethane 20 78-93-3 ND 2-Butanone 5 ND 104-51-8 n-Butylbenzene 5 ND Carbon disulfide 75-15-0 5 56-23-5 ND Carbon tetrachloride 5 108-90-7 ND Chlorobenzene 5 ND 75-00-3 Chloroethane 5 ND 67-66-3 Chloroform 5 74-87-3 ND Chloromethane 5 ND 95-49-8 2-Chlorotoluene 5 106-43-4 ND 4-Chlorotoluene 5 124-48-1 ND Dibromochloromethane 5 ND 96-12-8 1,2-Dibromo-3-chloropropane 5 ND 106-93-4 1,2-Dibromoethane 5 74-95-3 ND Dibromomethane 5 95-50-1 ND 1,2-Dichlorobenzene 5 ND 541-73-1 1,3-Dichlorobenzene 5 106-46-7 ND 1,4-Dichlorobenzene 5 ND 75-71-8 Dichlorodifluoromethane 5 75-34-3 ND 1,1-Dichloroethane 5 ND 107-06-2 1,2-Dichloroethane 5 ND 75-35-4 1,1-Dichloroethene 5 ND 156-59-2 cis-1,2-Dichloroethene ND 156-60-5 trans-1,2-Dichloroethene

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: METHOD BLANK

9506395-05A WATER

ab Number: ample Matrix/Media: Preparation Method: EPA 5030A Method Reference:

EPA 8260A

Date Sampled: Date Received: - -

07/11/95 Date Prepared: Date Analyzed: 07/11/95

Analyst: JР

		· · · · · · · · · · · · · · · · · · ·	Method
			Detection
		Concentration	Limit
nalyte	CAS #	(ug/L)	(ug/L)

nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
olatile Organic Compounds (Cont	inued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1	ND ND ND ND ND ND ND	5 5 5 5 5 5 5 5
Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone	87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1	ND ND ND ND ND ND	5 20 5 5 5 20
Naphthalene n-Propylbenzene sec-Butylbenzene Styrene tert-Butylbenzene 1,1,1,2-Tetrachloroethane	91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6	ND ND ND ND ND	5 5 5 5 5
1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane	79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5 79-01-6 75-69-4	ND ND ND ND ND ND ND ND ND	5 5 5 5 5 5 5 5 5 5
1,2,3-Trichloropropane	96-18-4	ND	5

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: METHOD BLANK Date Sampled: -
Bb Number: 9506395-05A Date Received: --

Pub Number: 9506395-05A Date Received: -Date Prepared: 07/11/95
Preparation Method: EPA 5030A Date Analyzed: 07/11/95

Method Reference: EPA 8260A Analyst: JP

halyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
platile Organic Compounds (Con	itinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8	460-00-4 1868-53-7 17060-07-0 2037-26-5	108 114 114 101	86 - 115 86 - 118 76 - 114 88 - 110

Not detected at or above limit of detection Information not available or not applicable

ND:

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-2

ab Number:

ample Matrix/Media:

Preparation Method: EPA 5030

Method Reference:

9506395-01C

WATER

EPA 8015/8020

Date Sampled: 06/28/95

Date Received: 06/28/95 Date Prepared: 06/29/95 Date Analyzed:

06/29/95

Analyst: WAS

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene	71-43-2	74	0.4
Ethylbenzene Toluene	100-41-4	2800	0.3
Toluene	108-88-3	900	0.3
o-Xylene	95-47-6	3500	0.4
p,m-Xylenes		8200	0.4
p,m-Xylenes Gasoline	→ ••	56000	50
urrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-1

ab Number:

ample Matrix/Media:

Preparation Method: Method Reference:

9506395-02A

WATER EPA 5030

EPA 8015/8020

06/28/95 Date Sampled:

Date Received: 06/28/95 06/28/95 Date Prepared: Date Analyzed: 06/29/95

WAS Analyst:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene Ethylbenzene Toluene	71-43-2	ND	20
Ethylbenzene	100-41-4	810	20
Toluene	108-88-3	ND	20
o-Xylene	95-47-6	ND	20
p,m-Xylenes		820	20
p,m-Xylenes Gasoline		22000 a	3000
<u>urrogates</u>		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

Not detected at or above limit of detection ND: Information not available or not applicable

Note: Detection limits increased due to dilution necessary for quantitation. Sample appears to be weathered gasoline.

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-13

ab Number:

9506395-03C

ample Matrix/Media:

WATER

Preparation Method: Method Reference:

EPA 5030

EPA 8015/8020

06/28/95 Date Sampled:

06/28/95 Date Received: 06/28/95 Date Prepared: Date Analyzed:

06/29/95

WAS Analyst:

CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
71-43-2	ND	0.4
	ND	0.3
	ND	0.3
95-47-6	ND	0.4
	ND	0.4
	ИD	50
	Recovery (%)	OC Limits (%)
98-08-8	106	50 - 150
	71-43-2 100-41-4 108-88-3 95-47-6	CAS # (ug/L) 71-43-2 ND 100-41-4 ND 108-88-3 ND 95-47-6 ND ND ND Recovery (%)

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: GP-4

ab Number: ample Matrix/Media:

Preparation Method:

Method Reference:

9506395-04A

WATER EPA 5030

EPA 8015/8020

Date Sampled: 06/28/95

Date Received: 06/28/95 Date Prepared: 06/28/95 Date Analyzed: 06/29/95

WAS Analyst:

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene	71-43-2	44	0.4
Ethylbenzene Toluene	100-41-4	21	0.3
Toluene	108-88-3	38	0.3
o-Xylene	95-47-6	19	0.4
p.m-Xylenes		46	Q.4
p,m-Xylenes Gasoline		380	50
urrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	111	50 - 150

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Analytical Results for Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: METHOD BLANK

Date Sampled: Date Received:

Lab Number:

Toluene

o-Xylene

9506395-05A WATER

Date Prepared:

06/28/95 06/29/95

ample Matrix/Media: Preparation Method:

EPA 5030

Date Analyzed: Analyst:

WAS

Method Reference:

EPA 8015/8020

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene	71-43-2 100-41-4	ND ND	0.4

 ND	0.4 50				
Recovery (%)	OC Limits (%)				

a,a,a-Trifluorotoluene

98-08-8

108-88-3

95-47-6

98

ND

ND

ND

50 - 150

0.3

0.4

0.4

Not detected at or above limit of detection ND:

Information not available or not applicable

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Analytical Results for

Capsule Environmental Engineering, Inc.

Clayton Project No. 95063.95

Sample Identification: See Below ab Number:

9506395

Date Received: 06/28/95 07/03/95 Date Analyzed:

mample Matrix/Media: WATER

Method Reference:

EPA 353.2

Lab umber -03	Sample Identification	Date Sampled	Nitrate-N (mg/L)	Method Detection Limit (mg/L)			
	GP-13 METHOD BLANK	06/28/95 	5.0 <0.05	0.05 0.05			



REQUEST FOR LABORATORY

For Clayton Use C	only Page		
Project No.			
Batch No.	9506	3395	
Ind. Code	114	W.P.	
Date Legged In	1,1-006	By AA	

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Novi, MI 48375 (810) 344-1770

160 Fieldcrest Ave. Edison, NJ 08837 (908) 225-6040

Suite 490 Kennesaw, GA 30144

(404) 499-7500

Pleasanton, CA 94566 (510) 426-2657

YELLOW - Clayton Accounting - Client Retains PINK

2/92